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Written Language in Elementary and Junior High School: Difficulties and Assessment

by

Ⓒ Hazel B. Love

A THESIS
SUBMITTED TO THE FACULTY OF GRADUATE STUDIES AND RESEARCH
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Supervisor

R.K. Jackson

DATE: October 11, 1985

To my mother and father
for their unconditional love,
support and faith in me.
I love you both dearly.

ABSTRACT

This study was conducted in order to investigate the types of problems that could affect the writing skills of students in elementary and junior high school. Additionally, the relationship between the written language ability of students and their skill levels in reading and oral language was examined. The most recent standardized test instrument available to evaluators at the time of testing entitled "The Test of Written Language" by Hammill and Larsen (1978) was used as the tool for the measurement of writing ability. Furthermore, writing scores were compared to scores from the "Wechsler Intelligence Scale for Children - Revised" (WISC-R) to establish if there were any patterns in an intellectual profile that were common to students with written language difficulties. Finally, teachers were asked to rank the writing abilities of their students and these ratings were compared to scores from "The Test of Written Language" (TOWL).

Two hundred and forty two students from grades three through seven were administered "The Test of Written Language". Their total writing scores were then compared to reading scores from the Gates MacGinitie Reading Tests and reading and language scores on the Canadian Test of Basic Skills in order to determine the relationship between writing (as measured by the TOWL) to reading and the "written language sections of an alternative test.

Twenty two students were also drawn from the larger population that were found to be experiencing problems in writing according to the

standards of the TOWL. "The Test of Language Development - Intermediate" was administered to students in grades three through five in the study group while the "Test of Adolescent Language" was administered to the students in grades six and seven. They were also administered a WISC-R if they did not already have a recent profile. Reading Scores from this group were also compared to the average norms at each of their grade levels.

Significant relationships were found between writing and reading with correlation coefficients of .46 or better in all areas of reading. Correlations between the written language quotient of the TOWL and the total language scores of the CTBS were even higher (.59 or greater). Generally students who were found to be weak writers were also found to be weak in reading and components of oral language. The relationship between writing and the other aspects of language was found to be complex and it was suggested that writing contains variables that are unique to this form of language.

It was also found that weak writers tend to have more difficulty with the mechanical aspects of writing (particularly spelling) than they do with ideation.

A significant relationship was also found between teacher rankings of students writing ability and measured abilities from "The Test of Written Language", however, it was suggested that teachers tend to place emphasis on mechanics over written expression of ideas.

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CHAPTER I

INTRODUCTION

In comparison to the amount of research about other areas of language useage there is a limited amount of literature pertaining to the study of written language. There is even less information specifically addressing written language problems or disorders. Recently, however, educators and researchers have begun to focus more attention on the acquisition, teaching and assessment of written language as a result of recent professional articles questioning the quality of writing in schools and colleges began to emerge Breland and Gaynor (1979) note that written expression skill gained public attention when it was discovered that the writing ability of students entering college appeared to be declining. Meridith and Williams (1984) discussed the very recent focus on writing in the United States. They cite a report from the National Commission on Excellence in Education indicating "that only 20% of American 17 year olds can write a persuasive essay" (p. 11). They also acknowledge a study conducted by Boyer (1983) for the Carnegie Foundation concluding "that writing is the most important and neglected skill in school" (p. 11). Roit and McKenzie (1984) note that this issue was also "addressed in public forums such as Newsweek" (p. 258) (i.e. "Why Johnny Can't Write" December 8, 1975).

The development of writing ability is extremely complex, which makes the field of written expression extremely difficult to study in its entirety. Silverman et al (1981) describes the myriad of components that are incorporated in written language:

> Language is basic to communication, and writing is perhaps the most sophisticated form of language. It depends almost entirely on three other forms - talking, listening and reading - but it involves distinctive skills that set it apart. Motor skills are required to produce the graphic images, and stored memories of motor patterns for cursive and manuscript letters must be reviewed. Spelling skills are required for easy recall of both regular sound-symbol associations and irregular or non-phonetic ones. Syntactical competence is required including knowledge of the conventions of punctuation, capitalization, useage and so on. (p. 91, 92).

One begins to realize that writing encompasses a vast number of skill areas and cognitive abilities. It is imperative however, to gain an understanding and appreciation for the interactions that all of these components have on written language if we are to develop quality instructional programs and assessment methods for students that treat writing as a "wholistic" process.

A. Background to the Study

Although proficiency in written language expression is generally agreed to be of enormous importance to the success of any student enrolled in an educational system and the future success in numerous areas of employment, there has been little attention devoted to the study and teaching of writing in past years. Gentry (1978) supports the value of skill in writing in our present society. She quotes Daly & Miller (1975) who state:

> Our age demands competence in writing. Naming an occupation where writing is not a requirement is difficult. Although it may not be a composition or essay that is required, most individuals must daily face the demand for writing competency. (p. 108)

Poplin et al (1980) note the following: "when one considers the role that written language plays in a student's educational well being, the amount of meaningful information regarding the nature of a student's written language products and their writing is discouraging." (p.46) Wells (1981) a researcher studying children's language development has observed a similar inattention to writing in England.

In a Canadian study performed for the British Columbia Ministry of Education by Conrey & Rodgers (1978) in which 9,000 students were assessed, it was reported that "achievement in written expression at the end of the elementary grade gave grave cause for concern." (p. 8). It was found that the performance of the grade eight students (as a group) was rated as "Satisfactory or better in only 14 of 33 skills assessed." Their findings were even more extreme at the high school level: "achievement in written expression at the end of the secondary grades was extremely disturbing. The interpretation panel rated performance of grade twelve students (as a group) as satisfactory on only 3 of 31 skills assessed." (p. 6)

A study conducted by the Canadian Institute for Research for the Minister's Advisory Committee on Student Achievement (MACOSA) in Alberta in 1978 had similar findings. Students from grades 3, 6, 9 and 12, from 284 schools were assessed for writing and reading ability and it was found that "student performance on the reading items were judged by markers to be generally satisfactory at all four grade levels," whereas "the majority of students are in need of additional instruction in those skills which are necessary for the production of an acceptable writing product." (p. i)

Studies such as these have undoubtedly caused a great deal of concern among educators. There have been a number of reasons offered to account for this lack of attention to written language. The primary reason is, that written language is considered to be the most complex and sophisticated form of language. (Silverman et al, 1981). (Anderson 1982), (Hammill 1982). Lerner (1976) describes writing as:

> A complex process which involves keeping in mind ones ideas, ordering ideas in some logical sequence and relationship, and planning or designing the correct placement of words or ideas on paper. When writing, children demonstrate their ability to formulate ideas, and transmit their ideas by written symbol. (p.188)

Morris and Crump (1982) also see written language as the "most complex aspect of the language arts". They observe that "facility in written language involves a myriad of skills including handwriting, spelling, grammar, capitalization, punctuation syntax, vocabulary and ideation." They conclude noting that "little is known, however, about the development of these skills and their relationship to proficiency in written language." (p. 163) It is this very intricate nature of the process of writing that makes it a very difficult area of study and research. Therefore, it is understandable that teachers feel confused and perhaps inadequate when they are faced with the responsibility of teaching students about writing when there is little agreement about the process of written language acquisition. Poplin (1983) states that "before educators attempt to promote student's growth in writing, we must know how children naturally develop writing abilities." This is often why teachers focus on the more easily identifiable elements of composition (i.e. the mechanics) in their writing programs and avoid the more abstract and qualitative aspects of the writing process such as ideation, unity, clarity, etc.

Teachers looking for all inclusive "packages" for the teaching of writing are being unrealistic, however, for as Alexander states, "composition consists of a set of skills that does not fit neatly into a scope and sequence schema." There may never be complete agreement about the process of writing so it will be necessary for teachers to review theories that are available about the composing process and as Tiedt (1983) suggests "develop a personal philosophy" that theoretically suits ones own teaching strengths and personality and that is of course, subject to revision as more is learned about written expression:

> In order to teach effectively, you need to know first of all, what you believe about what, how and why you teach. In order to be an effective teacher of writing, you need to clarify your thinking about writing and the process of teaching young people to write. You need to develop a personal philosophy of writing instruction. (Tiedt, 1983, p. 2)

Another reason to help account for the suggested general decline in writing ability is that the time allocated to the teaching of written language in the schools is far less than the time provided for reading instruction. Reading appears to be the primary focus of the language arts program. Donald Graves (1978) has written extensively about the lack of attention given to writing in American elementary schools. He feels that there is an inappropriate dominance of reading instruction in the schools. Walshe (1977) in a report to the Third Australian Reading Conference states the following:

> ...there is a mad cleavage today between reading and writing. Instead of being inseparable heads and tails of literacy, reading is indulged, lauded and promoted while writing is avoided, derided and neglected. (p.55)

Silverman (1981) agrees with these observations, she also notes that the "contemporary pressures on schools have stressed the urgency of helping children learn to read rather than write." (p.91). Some of this focus on reading over writing may be due in part to the theories that oral language and reading are pre-requisite skills that must be well developed before writing instruction can begin. Teachers need to know what the relationship is between oral language, reading and writing. The lack of agreement about processes, theories and the elements to focus on in a writing program understandably contribute to a great deal of discussion and controversy about appropriate methods for assessment of written language. Brown (1980) makes the following statement:

> The clamour of education's many constituents for various kinds of information about basic writing skills makes the task of selecting appropriate tests or evaluation programs both complicated and confusing. Teachers, students, school superintendents, deans, graduate schools, parents and the business community, all demand different kinds of information congruent to their needs and their perceptions about language and the nature of evidence. (p. 105)

Therefore, there is an equal lack of concensus regarding what constitutes the critical components of writing that are necessary for evaluation and, even if these could be defined, what tests or testing methods provide a valid and reliable measurement of writing ability?

Unfortunately the amount of research concerning written language problems and disabilities is even more sparse. Poplin (1980) has noted the scarcity of research comparing the differences between learing disabled and normal children. Knott (1981) has pointed out that "systemic study and analysis of learning disabled childrens' difficulties in written language are less presented in the literature when compared to other verbal channels." (p.24) Again, reading remediation appears to be the primary focus of school programs for learning disabled students. Cruikshank (1980) feels that often:

> ...so much concentration is invested in reading instruction for disabled readers that writing is all but ignored. It is not surprising that even those reading disabled students who eventually develop some facility in reading often achieve only primary levels of written expression. (p. 239)

Blalock (1981) conducted a study in which thirty-eight adolescents previously diagnosed as learning disabled, were surveyed for their most common academically related problems. Of the thirty-eight, five complained of arithmetic problems, three complained of oral language difficulties, twenty-five of reading problems and thirty complained of written language difficulties. Members of the group generally felt that their problems with writing affected their ability to function in society and prevented any higher level employment. Ninety percent (90%) of that group were assessed to have written language problems. Even those group members who were found to have adequate scores on most reading and spelling assessments were reported to have serious problems in "connected writing formulation." (p. 45).

Reports such as these indicate the need for an improved focus on the problems and needs of students experiencing difficulty with written language skill development. Professionals in the learning disability field and all areas of special education are obliged to ensure that teachers are provided with realistic and carefully structured programs that help to prevent the learning disabled child form being crippled both socially and vocationally because of the inability to write.

B. Purpose of the Study

Based on an acknowledgement and respect for the complexity of writing, this study and literature review was conducted in an attempt to investigate as many of the factors that influence written language and its assessment as possible, in order to gain at least a partial understanding of the difficulties that a child can experience in the composing process. The more specific purposes follow:

1. To extensively review the literature for test instruments that may be useful in assessing a child's strengths and weaknesses in written language. To examine the usefulness and validity of the recently published Test of Written Language (Hammill and Larsen 1978) as an instrument for: identification of students performing behind their peers in written language, and for ascertaining strengths and weaknesses in written language skills.

2. To examine the relationships between a child's written language

scores on the TOWL and his or her scores on standardized tests measuring reading skills, language mechanics, and oral language skill levels.

3. To explore the nature of writing difficulties and to determine what relations or patterns exist in terms of specific skill areas, that may be common to children experiencing written language problems.

4. To ascertain the incidence of children experiencing written language problems as measured by the Test of Written Language.

Definition of Terms

Writing Modes - different forms of categories in writing such as descriptive, argumentative, expository, imaginative, scientific report, etc. (Delves 1972)

Objective Assessment - is the same as an indirect assessment that measures a student's writing skills through a contrived format.

Written Expression/ Written Language/ Writing/ Written Communication - These terms are used interchangeably as a term "that encompasses the entire graphic process, including generation of ideas, spelling, syntax and penmanship". (Silverman et al 1981, p. 92)

CHAPTER II

SELECTED REVIEWS OF RELATED LITERATURE

A. Introduction and Chapter Overview

There are no universally accepted theories pertaining to written expression development or the difficulties children experience in the acquisition of written language skills. Additionally, there is no agreement regarding written language assessment. For the purposes of this study, discourse theories from three different perspectives are presented, followed by a discussion of the literature examining the realtionships between writing, oral language and reading. Then, a review of types of assessment used in written language, and the research that examines their usefulness is presented. The final section of the literature review discusses difficulties experienced by students in the development of writing skills and research related to learning disabilities in written language. A summary and discussion of the research questions in the study concludes this chapter.

B. Theories About the Writing Process

There are a wide array of theories about the process of composing.

As was previously indicated, it is a highly difficult area to attempt to analyze due to its complexity. Brown (1982) notes the following:

> The scope of the field of written composition, stretching as it does from classical rhetoric through cognitive psychology and psycholinguistics to problems of readibility and document design, draws from so many fields and points in so many directions that it is not easily anotomized. (p. 296).

Myers (1983) has attempted to discuss the various philosophies of writing by categorizing them under three general headings - "processing, modelling and distancing" (p. 3). In processing the theory centers on the series of thought processes used by the writer during the writing act. In modelling, theorists examine writing from a behavioural point of view. Finally, in distancing the theories are concentrated on the connections between the writer and the topic and the writer and his or her audience. Representative theorists from each persepective about the writing process are discussed below:

A Cognitive Process Theory

Flowers and Hayes (1981) asked writers to describe the strategies they were using throughout their composing episodes. Based on their observations they see written expression as a cognitive process in which a writer uses a number of problem solving strategies to produce a written product. They do not feel that writing can be defined as a heirarchical process in which the student writes in distinct stages such as planning, then writing, then revising and editing. They feel that "writing processes are not constrained to occur in a fixed sequence":

> The writer uses the processes as if they were tools in a tool kit to be applied in any order the job demands. For example, while reviewing, a writer may discover an inadequate transition between sentences. To remedy this situation, the writer may call in the planning and transition processes to insert new sentences in the text that will smooth the transition. (Hayes and Flower 1983, p. 210)

Their model of writing includes three main components:

1. The task environment - which begins with the "rhetorical problem" or the writer's task. If the writer is a student, the rhetorical problem is usually in the form of an assignment that includes such instructions as the topic and who the writing is to be addressed to. Once the writing has defined the problem according to individual goals then he or she begins to write and develop a text which is another part of the task environment. Hayes and Flower (1983) note that "each word in the growing text determines and limits the choices of what can come next". (p. 371)
2. Long-Term Memory - The written text is influenced by the writers long-term memory which is defined as the writers internal knowledge about such things as the topic, the audience or writing conventions, and material contained in external sources such as

articles and books. The authors note that "what counts in writing is not what the writer may be said to know but what he or she is able, or chooses, to draw from memory during the act of composing" (Hayes and Flower 1983 p. 209)

3. The Writing Processes - These are the mental reasoning processes used by the writer as he or she composes. They include:

Planning - this involves the creation of ideas, decisions about the organization of the text and "the setting up of goals and procedures for writing". (Hayes and Flower 1983, p. 209). In planning, there may not be any writing involved and the process is ongoing during the entire writing episode.

Translating - This is the written production of the components accumulated during the Planning process. This is not necessarily a flowing act in which the writer composes fully formed ideas and sentences. He or she may often have to go back and forth between Planning and Translating.

Reviewing - This involves two subprocesses: evaluating and revising. In evaluation, the writer may actually read what he or she has written or it may be a mental evaluation of what is being planned. If, during evaluation, some problems are identified, then revision takes place. This may lead to "new cycles of planning and translating" (Flower and Hayes, 1981 p. 374). The review process can be methodical - when the writer decides to stop and examine what has been written or it can occur when the writer happens to notice an error or problem in his/her composition. The process in reviewing can take place at anytime throughout composing.

The Monitor - Hayes and Flower (1983) call this the "executive of the writing process" (p. 209). It establishes the point at which the writer moves from one process to the other - for instance, when a writer has planned enough content to begin to write. The monitoring process is different from one writer to another and varies depending on the task. Some writers spend a good deal of time mentally planning their compositions and others can begin to write almost immediately. The task can also vary from something fairly straight forward such as a memo that could be written quite quickly with little planning to a detailed document that could take many weeks of planning before the writer attempts any acutal writing. The writing model diagramming these processes follows:

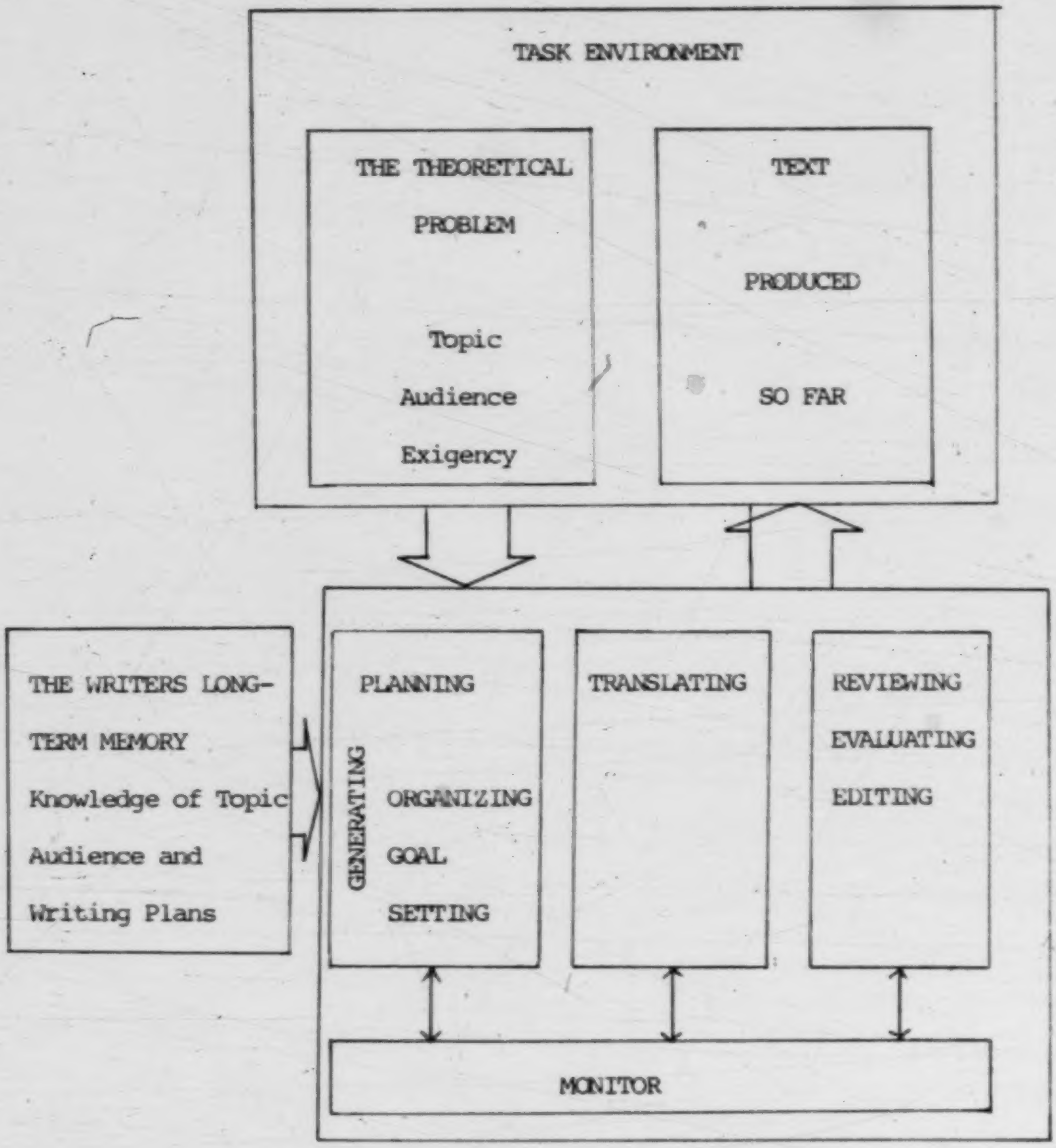
TASK ENVIRONMENT
THE THEORETICAL PROBLEM
Topic
Audience
Exigency
TEXT PRODUCED SO FAR
THE WRITERS LONG-TERM MEMORY
Knowledge of Topic
Audience and
Writing Plans
PLANNING
GENERATING
ORGANIZING
GOAL SETTING
TRANSLATING
REVIEWING
EVALUATING
EDITING
MONITOR

Figure I

A Cognitive Process Model

From Hayes and Flower (1981) p. 370

Flower and Hayes (1978) have suggested that this model can help the writing teacher to plot the difficulties experienced by weak writers "in terms of their procedures rather than their errors" (Myers 1983, p. 26)

A Behavioural Theory

Behaviourists attempt to focus on what it is that a person actually does when he or she composes. Myers (1983) describes behaviouristic theories under two categories:

First, there are theorists led by Skinner, who described writing as strictly a learned behaviour based on "sequences of stimulus-response-reinforcement" (Myers 1983 p. 4). Kaplan (1985) explains that Skinner's point of view is that "language is a set of habits, that children learn language by imitating the behaviour of adults and that children learn "right" language because they were rewarded for "right" behaviour and punished for "wrong" behaviour". (p.2)

Conversely, the second general point of view was popularized by Noam Chomsky. He contends that all humans are born with a natural capability for the acquisition of oral and written language and that exposure to language in the environment is "sufficient to trigger that predisposition" (Kaplan 1985, p.3). Emig (1981) summarizes Chomsky's outlook:

> As humans we seem to have a genetic predisposition to write as well as to speak, and, if we meet an enabling environment, one that possesses certain characteristics and presents us with

> certain opportunities, we will learn. (Chomsky 1972, p. 22)

Chomsky attacked Skinner's proposals stating that the reinforcement of learned behaviours could not possibly account for all oral and written language development.

Chomsky then went on to develop a grammatical model for writing and oral language which, he admitted may not be useful for their teachings:

> Linguistics is a pure science which deals with the study of language. When the linguist is studying a particular language, or when he is preparing a model for the study of language or for the evaluation of grammars, as Chomsky would have it, he is quite frankly not concerned with the problem of whether or not his study has any practical applications. (Ney 1975, p. 41)

Based on his theories however, a method called sentence combining was developed as a "way of giving grammar a functional role in writing" (Meyer 1983, p. 9). The premise of this method is that beginning students should not be assigned a full composition as it is too complex to address at first. Instead students begin with lessons in which they practise developing sentences. The sentence combining method is rooted in Chomsky's theory that structural grammar does not recognize distinctions between sentences such as "John is easy to please" and "John is eager to please", and yet makes distinctions between sentences such as "He took off his hat" and "He took his hat off"

(Fowler 1971, p.11). Chomsky contends that structural grammarians would find the first two sentences identical and the last two different based on the arrangement of the words. The order of the words however, only accounts for what he terms the "surface structure" of the sentence. He suggests that a grammatical analysis is more meaningful if one also looks at the "deep structure" or the meaning contained in the sentence.

A Social Context Theory

James Britton (1975) and his colleagues conducted an ambitious study in which they observed students and collected 2,122 samples of writing from them. The five hundred students involved in the study were between the ages of eleven and eighteen. The sample was drawn from sixty five secondary schools. Britton et al attempted to describe writing from a social standpoint, according to the roles of the writer, his or her purpose (or the function of the writing) and the audience to be addressed. Their purpose was to arrive at a developmental model that incorporated all of these roles and defined the processes included in written expression.

In describing the functions of writing, the premise of their theory is that there is a close link between speech and writing. Britton et al felt that the writing of young children looked very much like "written down speech" (p.11) which they describe as expressive writing. This type of writing is described as "language close to self, revealing the speaker, verbalizing his consciousness, displaying his close relationship with the reader:. (Cooper and Matsuhashi 1983, p. 14). Expressive writing is generally undetailed and informal. Examples of this type of writing are notes or personal letters to friends, entries made in a diary or journal, notes jotted down in the planning of a writing task (which often only the writer can understand) etc. The authors contend that the expressive mode is central and critical to all other kinds of writing, and that talking because of its relationship to the expressive mode is a necessary part of the writing process.

From expressive writing, a student then begins to develop skills in other forms of writing, namely transactional and poetic. Their diagram outlining and explaining the forms of writing and their relationship is provided below:

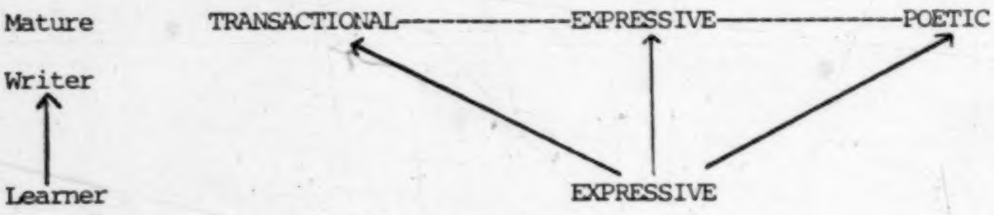

Figure II

"The Expressive As A Matrix for Development of Other Forms of Writing"

(From Britton, Burgess, Martin, McLeod, Rosen, 1975, p. 83)

Transactional writing is the writing "for getting things done" (Beard 1984, p. 5) and "it is concerned with an end outside itself". (Cooper and Matsuhashi 1983, p. 14). There are two main subcategories within transactional writing:

Conative - its purpose is either "regulative" - to communicate orders or instructions (it is presumed that the instructions will be followed) and "persuasive" - it is an endeavour to convince or motivate (since obedience cannot be taken for granted) and secondly:

Informative - which as its title suggests is to convey knowledge. The informative subcategory has seven subgroupings including, to record, report, narrate or describe; analogic (generalizations loosely related); analogic-tautologic (conjecture) and tautologic ("hypotheses and deductions from them") Cooper and Matsuhashi 1983, p. 14).

The poetic mode "uses language as an art medium" (Britton et al 1975, p. 90) and is produced for its own benefit. It is a structured expression of the writers consciousness and beliefs. Poetic writing is more formal than expressive writing. Examples of this type of writing are the lyrics of songs, poems, stories, plays, etc.

One of the major distinctions made between poetic and transactional writing is the role of the reader. In transactional writing the reader is described as a "participant", as the writer "shifts his focus towards the listener or his topic". When the writer changes his or her focus to "the message or the exact words and their relationships" the reader becomes a "spectator" (Beard 1984, p. 54).

Britton et al devote a considerable amount of attention to the writer's audience. They feel that it is extremely important for a writer to learn to adapt his or her content and style to the particular audience to be addresseed. They specify the following "audience categories":

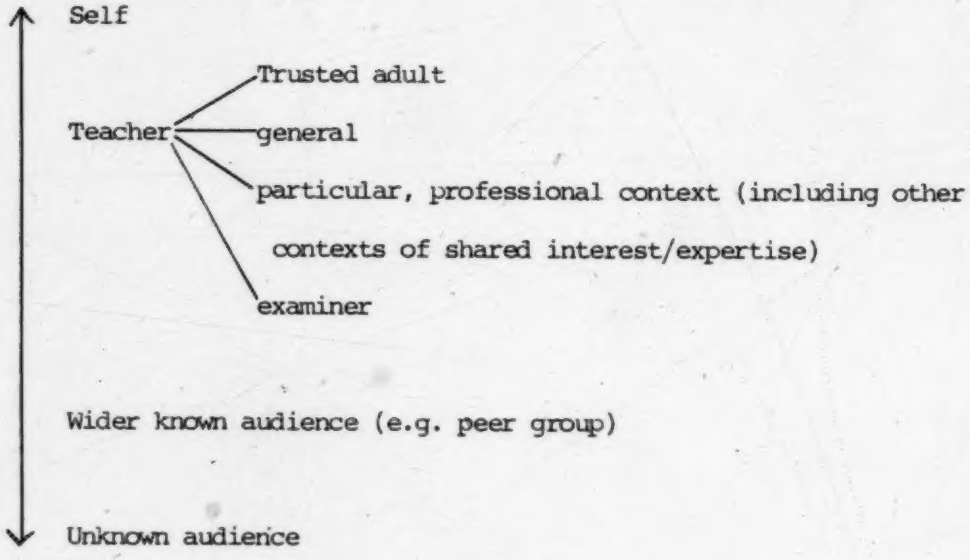
Self
Trusted adult
Teacher
general
particular, professional context (including other contexts of shared interest/expertise)
examiner
Wider known audience (e.g. peer group)
Unknown audience

Figure III

The Writer's Audience (Britton, 1975)

(From: Roger Beard 1984, p. 55)

The actual processes involved in any writing are described by the authors as conception, incubation (both of which are a prewriting stage) and production or writing.

1. Conception - As Britton et al (1975) note, "writing is a deliberate act; one has to make up ones mind to do it" (p. 22). In conception, the writer decides to write based on any number of motivators. He or she can simply be motivated to write for personal reasons, but more often the "motivation" for a student is in the form of an assignment. These assignments can define the parameters of the writing task, the topic etc. or they can be fairly open ended, asking the student to select a topic of his or

her choice. Regardless of the specificity of the assignment the student draws on previous experiences, accumulated knowledge (memory) and his or her personal thoughts or opinions in arriving at conception which is the way a writer defines or interprets to himself what it is that he or she must do. (Britton et al 1975, p. 23).

2. Incubation - is the planning of the writing to be produced. The planning process is unique to each individual as it depends on his or her background knowledge and beliefs about planning (systems that the writer is comfortable with). This is the stage at which the authors encourage teachers to allow students plenty of time to think of ideas and plenty of opportunity to talk about their ideas, so they can learn to organize and test their theories or ideas.
3. Production- the authors note that this is the most difficult process to study. They do not have a structured description of this process but make a number of statements about it based on their observations of students, their conversations with writers and their study of writing samples. During production they have noted the following: Writing is not an uninterrupted process. It consists of many stops and starts, and frequently there is more time spent thinking than writing. Writers constantly glance over what they have written. It appeared to the authors that this scanning was done for two major purposes - "to keep overall control of what his is doing, as well as to make corrections and

improvements" (p. 32 - 35). The authors also note that during the actual writing of a composition it is not helpful, in fact it is distracting for the writer to be interupted by someone who may even be sincerely attempting to make suggestions or provide assistance.

C. Writing and Its Relationship to Oral Language and Reading

It is important to determine how students most naturally develop writing competency in order to plan effective teaching and assessment programs. Therefore, understanding the contribution of oral language and reading to the acquisition of writing skills is essential. Martin (1966) states that:

> The problem facing the English teacher is that of first distingushing clearly between the spoken and written (reading and writing) forms of the language and of applying standards appropriate to these different uses, and then of applying standards appropriate to the different levels of attainment of different children. The difficulty is that there are no norms other than those built up by experience in teacher's minds. We have very little precise knowledge as to what linguistic features characterize stages of progress in language and in what order these are learned (p.66).

Again, there are a number of opinions about the relationship between the writing and the other components of language. Some feel that writing is closely linked with oral language and/or reading. They see writing as a final stage in the heirarchy of language development, and suggest that writing instruction should only be attempted after a child is skillful at speaking and reading. Additionally, they would presume that problems in oral language or reading would prevent the acquisition of written language. Others, while acknowledging the interelationships between language functions feel that there are certain features that are distinctive only to written language. Some of these theorists suggest that writing "can be learned in conjunction with or even in spite of various impaired links" (Bain p. 79).

THE RELATIONSHIP BETWEEN ORAL LANGUAGE AND WRITTEN LANGUAGE

Hirsch, in 1977 wrote that the Bloomfield opinion that "writing is not a language, but merely a way of recording language by means of visible marks" (p. 33) was still a dominant opinion among professionals. He dismissed this notion as too simplistic and wrote that "writing is a form of speech having its own special requirements" (p. 18). He goes on to state that:

> The chief distinction between oral and written speech, when the two are considered from a functional point of view is the absence, in writing, of a definite situational context. Oral speech normally takes place in an actual situation that provides abundant non-linguistic clues to the speakers intended meaning. Written speech by contrast, must normally secure its meaning in some future time, in varied and unpredictable situations and for the understanding of a varied and unpredictable audience (p. 21).

Backlund et al (1980) also discusses the differences between oral communication and writing. He suggests that while there is a relationship between them they also have features that are independent of the other, characterized by "time, medium and relationship" (p 624).

Time - Oral language is immediate, that is the speaker must express his or her ideas directly to the listener. There is a higher incidence of grammatical errors in oral language due to the limited amount of time the speaker has to select the wording in the presentation. On the other hand, the writer has more time to revise and edit his or her communication before it reaches the audience. "The response to the writer is not immediate and it does not require the give and take of oral communication" (p. 624).

Medium - There are very different skills necessary for communication in oral and written language. Writing employs the use of written symbols while a speaker relies on sound and non-verbal symbols. Backlund (1980) suggests therefore, that there are "quite different neurophysical mechanisms involved in producing messages" (p 625). The writer must have ability in mechanics and handwriting to produce a message that is understandable. If he or she wishes to place emphasis on a point to the reader then he or she must rely on methods such as punctuation, underlining or letter size to convey this. The speaker can "communicate his or her particular feelings about something in a number of ways including "voice quality, intonation, stress, junctive and bodily actions" (p. 625).

Relationship - Oral language communication involves a speaker directly addressing the listener. The speaker's style of language is unique, more concrete, more personal and more cognisant of time, place and occasion. Vocabulary tends to be simpler, and the density of ideas is greater" (p 625). The language used by the speaker then, differs from that of the writer in terms of the amount of abstraction, difficulty of comprehension, and psychogrammatical features.

Phelps-Gunn and Phelps-Teraski (1982) agree that people do not write in the same way that they speak. In fact they feel that oral language does not even act as "a guide for written language" (p. 18):

> Not only is writing not aided by oral dictation, it also has a different base in linguistic and structural elaboration. Elaboration refers to the complexity of sentence structure, verb choice and diction. By the middle grades, children's writing is more fluent and complex and of higher syntactical quality than their oral language (Bavery 1968; McLean 1964; Martellock, 1972; Lemon and Buswell 1943). The writing process is more under control than speech since the writer can fashion and refashion a sentence to suit the intent. (p. 19).

In looking at the differences between oral language and writing a number of authors have noted individuals who appear to have well developed writing skills and yet are poor speakers and those who are excellent speakers who appear unable to express themselves in writing.

> As an over-simplification, children who have learned to talk should be able to write, once they recognize the symbols. We know that this

> proposition is not always correct. Some excellent speakers have been otherwise illiterate some very fine writers seem to have great difficulty in oral communication (and some have been unable to talk at all) (p. 50).

In fact, Vygotsky (1962) notes that sometimes there is a difference of up to eight years between the "linguistic age" of a persons speaking as compared to his or her writing. He sees written language as a "separate linguistic function, that differs from oral language in both structure and mode of functioning" (p. 98). He also points out that it is necessary in learning to write for a child to "disengage himself from the sensory aspect of oral language and replace words with images of words" (Marcus 1977, p. 144). Halpern (1984) agrees with this observation. In studying taped transcripts that had been written and edited for publishing by two "experiened editors" he found that:

> In converting the speech on the tapes to writing in the text, the editors had been addressing many of the problems I observed in the writing of my college students. This coincidence suggested, first that my students were unconsciously transferring their knowledge of the spoken code to written and, second, that they were unaware that the processes, requirements, and conventions of writing differ substantially from those of speaking (p.345)

Backlund et al (1980) cautions professionals to look carefully at the interelationships between the various language components. He feels that it may be "tempting to assume that skills learned through one mode of communication, e.g. writing, can be transferred easily to another mode e.g. speaking (p 624). He suggests that these assumptions may carry over to assessment of language skills in which it could be presumed that an instrument for testing one language area may also be suitable for predicting compentency in another: "a reading/writing test may assess and be valid for reading/writing competencies, but to make a judgement of speaking/listening competencies from the same test would be highly inferential". Barenbaum (1983) also acknowledges the realtionships that exist between oral language and writing but suggests that "one must caution teachers though, that increasing the number and variety of oral language experiences children have, will not necessarily increase success in written composition" (p. 14).

The above position would be challenged according to Barenbaum (1983) by researchers such as Moffett (1973), Hefferman (1967) and Groff (1978) who contend that the aquisition of both reading and writing skills are dependent on a childs oral language development (p. 13). Dyson (1981) in describing oral language as the "rooting system for learning to write encourages beginning writers to write down their talk". She states that "a good beginning would be to recognise the two tools of early writing: the pencil and the voice: (p. 784). Barbara Cordoni (1978) calls writing "a form of verbal behavior" (p. 3) and feels that the introduction of writing at too early a stage for a child can be damaging: "in some cases, students may have been taught writing skills before they were developmentally ready for them, thus diminishing their future ability to learn those skills" (p. 1).

All research and theories reviewed suggest however, that there is some degree of relationship between reading and writing but as

Barenbaum (1983) notes in quoting Reid and Hrensko (1980) the real question is "whether written language and reading are parasitic upon spoken language, that is, whether writing is really only silent speech and reading is visual listening" (p. 14).

THE RELATIONSHIP BETWEEN READING AND WRITING

There is a limited amount of literature addressing the relationship between reading and writing (Applebee 1977; Chew and Schlawin 1983). Stotsky (1983) states that:

> Inasmuch as reading and writing are both language processes, one can assume relationships between them. However, the exact nature of these relationships, as well as the influence of specific teaching methods and curricular activities upon their development has not yet been determined...Reasons for the relative paucity of research on the interrelation of the two major components of literacy must remain speculative... reading has usually been related to listening and writing to speaking rather than one to another. What ever the reasons, the result is that we know far too little about the relationships between reading and writing. (p. 627)

A great deal of focus has been placed on the process of reading but there has been little examining the effect of writing instruction on reading or the converse. Bryant and Bradley (1983)note that:

> Psychologists have spent a great deal more time on children's reading than on their writing, and their comparative neglect of the children's written input is probably due to a widespread

> assumption that children draw on much the same processes to read and to write. (p. 163)

Another reason that may account for the lack of focus between the two processes, was the prevalent opinion that reading developmentally preceeded writing in the language hierarchy. Consequently, it was necessary to have well developed reading skills before writing was taught. This contention is now being challenged and theorists and researchers are presenting evidence suggesting that reading and writing are two distinct processes that can and should be taught in conjunction with each other.

Wittrock (1983) states that "reading and writing differ sharply from each other in the thought processes and human behaviour they represent" (p. 600). He feels however, that the reading comprehension process is often over simplified when it is compared to the complexities involved in writing. He suggests that reading comprehension is equally as complex as writing and draws parallels between the two based on this premise. He describes writing as the "process of putting meaning on written pages, while reading is the process of getting meaning from written pages" (p. 600). He states that in order to understand what is being read, a reader links sections of the text to each other and also draws on his or her memory and aquired knowledge base. For writers to clearly express their ideas, they must "generate meaning by relating our (the audiences) knowledge and experience to the text" (p. 601). Writing also calls for the ongoing linking of words to sentences which are then developed into paragraphs. In these ways, Wittrock contends that reading comprehension and writing are similar and equally as difficult to learn and to teach.

Klose (1983) takes these comparisons between the two one step further and suggests that reading and writing have a connection that is both "intricate and significant", and that the implications of this relationship are that "interrelated instruction throughout the stages of each process, followed by meaningful practice, will lead to competence in both strands" (p. 18). Several researchers agree wtih this observation: Dagenais and Beadle (1984) review the work of Donald Graves who suggests that "children are motivated to begin writing at an early age" (p. 60). He also contends that "the evaluation and revision of one's own writing is one of the higher forms of reading" and that "writing may also build reading skills since it is an active process" (p. 61).

Lickteig (1981) notes that Durkin (1966) agrees with Graves and states that "there is something "natural" about writing; most young children "write" and manifest interest in writing before they demonstrate interest in reading" (p. 47). Poplin (1983) states that:

> We know now that listening, speaking, reading and writing to a large degree develop simultaneously rather than sequentially. Certainly, these various language abilities reinforce one another as they emerge. Not only does this new information change the definition of early writing and the assumptions

> about the emergence of developmental writing abilities, but it can also affect our assessment practices. (p.65)

She notes that the following authors have questioned the developmental heirarchy that suggests that writing skill acquisition only occurs after the developmnt of oral language and reading skills "Hildreth, 1936; Ames and Ilg, 1951;Chomsky, 1970; Britton, 1970; Downing, 1972; Read, 1973, 1975, 1980; Clay, 1975; King and Rentel, 1979; Bissex, 1980; Deford, 1980" (p. 64). Dobsen (1983) discusses the work of Chomsky (1971) and Clay (1975) who studied the relationships between beginning reading and writing. They found that initially, some children learn to write more easily than they learn to read. Dobsen reports that her research results have indicated that "learning to write can facilitate learning to read" (p. 2).

To date, research on children's language develoment and the relationship between oral language, reading and writing has only investigated a small portion of a vast and complex area. Continued investigation is warranted however, if educators are to develop programs and materials that are based on a clear understanding of the factors that lead to the improvement of children's language achievement (Ruddell, 1966).

RESEARCH EXAMINING WRITING'S RELATIONSHIP TO ORAL LANGUAGE AND READING

Baden (1981) conducted a study that compared the written composition scores of 81 children in the third grade to reading skills and pre-kindergarten verbal abilities. The test instruments used for reading and writing assessment were the Woodcock Reading Mastery Tests and the Test of Written Language (TOWL). He found that:

A significant relationship (p .001) existed between the composite skills of reading and writing, and a significant relationship (p .05) existed between pre-kindergarten verbal ability and third grade writing performance. He concludes that the findings in his study support the notion that "language arts skills are interrelated and reciprocal, giving support to the theory underlying methods which combine reading and writing, such as the language experience approach" (p. 1517-A)

Applebee (1977) looked at the relationship between reading and writing and cites the following studies:

Loban (CS 202 933) conducted a thirteen year longitudinal study of the language development of 211 California children and found strong positive correlations among speech, reading, writing, and listening skills. Loban noted that children with superior oral language skills in kindergarten and grade one "are the very ones who excell in reading and writing by the time they are in grade six".

Lazdowski (CS 002 906) studied 338 writing samples from high school and college students with reading levels ranging from grade four to fourteen, he constructed a formula to predict reading level from such features of the student's writing as mean sentence length, syllables per thought unit,and polysyllabic words per sentence. For his sample of students, the formula based on features of their writing predicted reading achievement to within one grade level with a reliability of .88.

As Applebee notes these studies show a close relationship between reading and writing but asks "to what extent do these relationships imply that there is a "write way to reading" or a "reading way to writing" (p. 55).

Wright and Reich (1972) conducted a study for the Toronto Board of Education in which composition scores from the writing samples of 526 eighth grade students were compared to the vocabulary and comprehension sections of the Gates-MacGinitie Reading Test. The correlations between the composition scores and both subtests were .46. The authors point out that this is a modest relationship and that reading and writing are to some extent separate abilities. They caution professionals not to make hasty generalizations from one to the other.

Liggett (1984) prepared an excellent annotated bibliography of the research and literature pertaining to the relationship between speaking and writing. She cites the following research:

Blass, Thomas, and Sieg (1975) conducted a study examining "how the mode of communication (speaking, dictating, or writing) and the topic (personal or impersonal) influences responses of eighteen students during an interview" (p. 335). The authors found a number of distinctions between the various modes and concluded that speaking, dictating and writing were all unique forms of language.

Harris, and McDonnell (1977) examined the oral and written syntactic abilities of 100 children at the grade two level. The purpose of the study was to establish whether the acquisition of oral and written syntax occurs in the same manner. They found that there was a "nonparallel attainment of syntactic competences, implying that children may acquire syntax as a dialect different from their spoken one" (p. 338).

Cayer and Sacks (1979) examined the T-Unit length and the syntax in oral and written samples from eight "adult basic writers". They found that although their writing was "syntactically more complex" than their oral language there were a number of similarities including:

(a) both relied on predictates more than subjects to transmit meaning (p. 335)

(b) both forms made use of "surface phrases such as "you know", that add little meaning to the written text" (p. 335).

The authors conclude that basic writers tend to draw on their knowledge of oral language to produce their writing.

Koeller (1984) cites a study conducted by Ollila, Mayfield and Williams (1982) in which the writing skills of six year olds from England, Canada and the United States were measured. It was found that the British children who had been taught using a "language experience approach" produced significantly more writing, with greater "syntactic maturity" than their American counterparts. Koeller concludes that the use of a language experience approach which focuses on writing taught in conjunction with reading with young children "provided an impetus for reading not possible by reading instruction alone" (Koeller quoting Ollila et al p. 331).

Stotsky (1983) provided a comprehensive overview of studies examining the relationship between reading and writing. She cites correlational studies in which comparisons were made between reading and writing ability; reading experience and writing ability; and reading ability and syntactic maturity in writing. She also includes studies examining the effects of writing on reading and conversely, the effects of reading on writing.

In summarizing these various areas of research Stotsky makes the following conclusions:

The majority of correlational studies indicated that "better writers tend to be better readers, better writers tend to read more than poorer writers, and that better readers tend to produce more syntactically mature writing than poorer readers" (p. 636). Additionally, there was no significant growth in reading skills reported when reading ability was measured following general writing instruction and writing exercises. Studies that examined the use of writing programs or writing tasks for the development of reading comprehension skills or for "retention of information in instructional material" (p. 636) reported "significant gains". In research that examined growth made by writers when reading experiences were introduced instead of grammar exercises or extra practice in writing it was found that the reading experiences produced equal or better growth in writing than the other methods. Finally, no significant results were reported in studies that measured growth in writing following reading instruction.

D. Methods for Assessment of Written Language

There are two main types of writing assessments; "indirect" and "direct". The indirect method is through use of objective tests. They are generally of a multiple choice or interlinear format, and often do not call for any type of a sample of a student's writing. Breland (1983) describes an indirect assessment as an "estimate of probable skill in writing made through observations of specific kinds of knowledge in writing." (p. 2). Skills such as grammar, punctuation, sentence structure and spelling are measured on an indirect assessment.

A direct assessment requires an actual writing sample or samples from the examinee. The samples are then read and scored by one or more raters who are trained in making judgements about skill in writing. They are used in an attempt to measure skills such as organization, content, development and unity.

INDIRECT ASSESSMENT OF WRITING SKILLS

There are relatively few objective tests for measurement of written language skills at an elementary and junior high level, as compared to high school and college levels. Some of the more widely used tests for assessment of elementary and junior high students are:

1. Sequential Tests of Educational Progress (STEP) - Educational Testing Service 1972.

   The STEP contains a complete battery of tests covering most core academic areas. It is designed to test at grade levels four through fourteen. The objective tests for measuring language skills are :

   English Expression - This is divided into two subtests:

   (i) Correctness of Expression - this subtest is made up of forty items and it tests grammatic knowledge such as useage, sentence structure, word choice, etc. The student is asked to read sentences containing underlined sections and he or she must decide if the section is grammatically correct or not.

   (ii) Effectiveness of Expression - in this twenty item subtest, the student is asked to read four options and choose the one that "best states all or part of a sentence." (Phelps-Gunn and Phelps-Teraski 1982, p.247)

   Mechanics of Writing Test - This also contains two parts. One is a spelling test (45 items) in which the student reads a list of three words and determines if any of the words are misspelled. The second subtest is made up of forty five items that test for knowledge of capitalization and punctuation. Again, the student reads a sentence containing an underlined section and decides whether or not there are any errors.

The STEP Writing Test - This test evaluates five general areas: Organization, Conventions, Critical Thinking, Effectiveness and Appropriateness. There are a total of 120 multiple choice items included in this test. The student is asked to read a number of sentences and select a single sentence that best answers questions such as: "Which sentence should come first?" or "which of these would be the best version of sentence X?" (Braddock 1976, p. 125). Phelps-Gunn and Phelps-Teraski (1982) note that the authors of the STEP have reported high correlation coefficients using the Kuder-Richardson 20 test of internal consistency. They also report that "validity measures are adequate, although content validity is not well explained in terms of the item selection process." (p 248). Braddock considers the STEP Writing Test to be "better than most" objective writing tests and feels that the items used in the test are generally grade level appropriate. He also notes that most of the items were based on actual writings collected from school and college students, which he feels is superior to the "use of concocted passages." (p.120)

In examining the limitations of the STEP Writing Test, however, Braddock (1976) questions its validity. As with any objective test in writing it is difficult to ascertain whether or writing it is difficult to ascertain whether or not a student is actually a good writer, even if he or she attains high scores on the test. He suggests that the test may simply provide a measure of "general scholastic ability" rather than of "writing ability". Braddock (1976) also points out that there are a number of items in the test in which a student could possibly choose more than one answer that "could be reasonably defended". (p. 120)

2. Test of Adolescent Language - Hammill, Brown, Larsen, Weiderholt (1982)

This test is designed to measure a student's expressive and receptive language skills in speaking, reading and writing. There are two subtests pertaining to written language. The scores of these two subtests are combined to form a written composite score:

(i) Writing/Vocabulary - Students are asked to use specific words in a sentence to illustrate their knowledge of its meaning. The authors chose this particular format because their research indicated that it was the most reliable of three methods tested. They also thought that it provided a better opportunity for a student who had "some" idea of a words meaning to use it in a sentence rather than having to arrive at a specific definition.

(ii) Writing/Grammar - Students are asked to combine a number of short sentences into one sentence that contains all of the

> necessary meaning and information. The authors state that this activity requires that a student be knowledgebale about "forming possessives, altering tenses, and embedding and transforming phrases." (p. 12)

This test was standardized using 2,723 children who ranged in age from eleven to eighteen. These students were enrolled in rural and urban schools across seventeen states in the U.S.A. and three provinces in Canada (British Columbia - 23 students, Saskatchewan - 25 students and Nova Scotia - 10 students). Reliability studies described in the manual, indicate coefficients of .80 or above for subtest scores and composite scores using a Coefficient Alpha as a statistical measure for internal consistency. The authors also report high retest consistency, and reliability coefficients of .90 or above for interscorer reliability. The authors also report good content validity "based on their item analysis and the choice of types of language tasks". (Phelps-Gunn and Phelps-Teraski, 1982 p. 257). Studies conducted by the authors comparing the total score from the TOAL to four criterion tests indicated acceptable criterion-related validity. Construct validity for age differentiation, group differentiation, and relationship to test of intelligence was also proven to be adequate.

Carolyn Compton (1984) also reviewed the Test of Adolescent Language and made the following observations regarding its strengths and weaknesses:

Strengths:

As the authors pointed out in their manual, there are a limited number of standardized tests for the adolescent population. The TOAL therefore, provided educators with "a needed addition to the field". (p.193). She finds that the test manual contains considerable data supporting the tests validity and reliability and also notes the inclusion of "scoring exercises" in the manual which in her estimation "demonstrates the authors attention to statistical reliability." Finally, Compton feels that the TOAL is a "comprehensive and interesting instrument". She notes that in her opinion the Writing/Grammar subtest is "quite relevant to written language skills." (p. 193)

Weaknesses

Compton (1984) does not suggest using this test for groups as it can take a long time to administer and explain some of the subtests. In her opinion some of the items in the subtests are in Compton's opinion somewhat "contrived to fit the model" outlined by Hammill and Larsen in the manual.

The usefulness of the composite scores as measures of a student's "actual abilities and instructional needs" are also questioned by Compton. She notes that more validation studies will be necessary in order to determine the usefullness of measures on the TOAL.

3. Canadian Achievement Tests (CAT - McGraw, Hill, Ryerson Ltd. (1981)

These tests were based on the California Achievement Tests, but edited and revised in an attempt to meet Canadian curriculum needs. The revised tests were standardized using students from across Canada.

There are eight levels of the Canadian Achievement Tests covering grades 1.6 through 12.9. All of the test is in a multiple choice fromat. The publishers claim that the test batteries are "norm-referenced and criterion ranked". In order to "provide information about the relative ranking of an individual against a norm group" and to "provide specific information about the instructional group" (p. 1). The entire test battery covers reading, spelling, language, mathematics and reference skills. Raw scores can be converted into scale scores, percentile ranks, stanines and grade equivalents.

The Language Section which provides a Total Language Score is divided into two subtests:

(i) Language Mechanics - The subtest contains 25 exercises. Ten of these are capitalization exercises in which the student is asked to choose the section in provided sentences, that requires a capital letter. The other fifteen exercises measure punctuation skills. The student must decide which of a selection of punctuation marks has been omitted from provided sentences.

(ii) Language Expression - The manual states that this subtest measures the following skills: language useage, sentence structure and paragraph organization. The publishers note that these skills are only "related to the effective written expression" (p.3). There are thirty-eight to thirty-nine items in this test. The language useage subsection is comprised of exercises such as selection of a word(s) to correctly finish a sentence; selection of a verb or subject in a sentence; choosing complete or incomplete sentences; selecting from a group of sentences the one which appears to be the most unambiguous; sentence combining and ordering and finally deciding on sentences suited to a topic sentence or a suitable concluding sentence.

Purves (1978) in the Eighth Mental Measurements Yearbook (Buros 1978) critiques the language section of the California Achievement Tests (1970 Edition). Those areas of his critique which appear to be relevant to the Canadian Achievement tests - Language section are: All items measuring capitalization and punctuation skills ask the student to find capitals or punctuation marks that are omitted from a sentence. Purves believes that it would be a more comprehensive assessment if the student were also asked "to locate the error and correct it" (p 134). He also comments on the limitations of the language section as a true measure of language ability.

Canadian Tests of Basic Skills (CTBS) - Ethel M. King (editor 1971)

This test battery was originally based on a set of tests developed by professionals from the College of Education at the University of Iowa, entitled the Iowa Tests of Basic Skills. The three subtests that combine to form a Total Language Score are:

(i) Spelling - Depending on the level, the student completes from thirty-one to forty-seven items on this subtest. The students are presented with words and must decide if they are misspelled or not.

(ii) Capitalization - There are from thirty-eight to forty-four items on this subtest. The students are presented with passages in which they are to indicate the number of the line which contains a word that should or should not be capitalized.

(iii) Punctuation - The majority of punctuation marks used in this subtest are periods, commas, question marks and apostrophes. Again, the student reads passages and indicates the number of the line which requires a punctuation mark.

There are thirty-eight to forty-four items.

(iv) Useage - There are thirty-two items in which the student reads passages and decides if there are any "mistakes" in word useage in each of the lines.

Standardization of this test was based on over 30,000 students from across English speaking sectors in Canada. The publisher will also provide data on local norms for across Canada. The test covers grade levels three through nine and provides grade percentile ranks and grade equivalents for each subtest and composite area.

The 1956 - 1970 version of the CTBS was critiqued by Birch (1972) in the Seventh Mental Measurements Yearbook (Buros 1972). He feels that this is a well standardized test with a good reputation for high validity and reliability due to the fact that it is simply a Canadian version of the commonly known Iowa Test of Basic Skills in the United States. He notes, however, that the "use of grade-equivalent, instead of age norms has evoked some criticism among testers in Canada" (p. 7), who feel that due to differences in school organization grade equivalents are not as meaningful. He also observes that the content in some of the tests may test "generalized educational skills" but may not be relevant to the content in the various curriculums across Canada.

DIRECT ASSESSMENT PROCEDURES

1. Holistic Scoring

In Holistic Scoring a student's writing sample is rated on its overall impression. Namjay (1981) describes it as being "based on the idea that the whole composition is greater than its components, that no components may be judged apart from the whole and that all components should be judged simultaneously." (p. 6)

There are usually two or more independent raters assigned to score each piece of writing. They commonly undergo a training program or a "team" discussion to define and record the standards for scoring the particular compositions. Often a sample of the papers are scored and discussed prior to the actual full scale scoring. They are called anchor papers or range finders and are used to represent the levels of quality in the set of papers to be scored. Raters use them as guides for matching other writing samples to them. Sometimes, raters are also provided with scoring guides or rubrics to use for evaluating papers. The samples are then assigned a rating such as "high", "average", "low" or a numerical rank. Tiedt (1983) provides an example of a holistic scoring guide developed for evaluating personal narratives of students in grades five through twelve:

Holistic Scoring Criteria

Use of this rubric assumes that writing samples will be read by at least two readers and that papers will be read as a whole without analysis. Even numbers may be used when papers seem to fall between the scores listed here.

SCORE	CHARACTERISTICS OF THE WRITING
1	The writer lacks understanding of the topic a. Little communication with the reader b. Confused sense of audience c. General lack of coherence or evidence of purpose d. Weak grasp of spelling, punctuation and syntax e. No sense of paragraphing
3	The writer understands the topic and writes relatively clearly. a. Lacks singleness of purpose b. Contains some irrelevancies c. Some attempt at organizing the materials coherently d. Some knowledge of spelling, punctuation and syntax e. Frequent mechanical errors.
5	The writer presents a fairly competent discussion of the topic a. Uses examples and/or details b. Reasonably clear purpose c. Evidence of adequate organization with few irrelevancies d. Some attempt at paragraphing e. A clear sense of conclusion f. Occasional mechanical errors do not interfere with clarity g. Syntax generally adequate with some fragments of run-ons.
7	The writer presents a full discussion of the topic with well-chosen examples and details for support. a. Some elaboration and refinement of ideas b. A clear beginning, middle and end c. A clear sense of purpose and audience d. Generally competent mechanically e. Few run-ons or fragments f. Some variety in sentence structure.
9	The writer presents unusually complete and/or imaginative development of the topic. a. Striking use of evidence, examples, details or reasoning b. Tightly or imaginatively organized with an effective opening

Holistic Scoring Criteria (cont)

SCORE	CHARACTERISTICS OF THE WRITING
	and conclusion c. Clear sense of writer control of voice, purpose and audience d. Mature sense of sentence structure e. Free from mechanical errors

Iris M. Tiedt (San Jose State University: South Bay Writing Project, 1980)

ADVANTAGES OF HOLISTIC SCORING

Spandel and Stiggins (1980) describe holistic scoring as "rapid and efficient". They note that an experienced rater could generally score thirty to forty papers within an hour. If raters are well trained the agreement between them can be quite good. Diederich (1974) reported that interrater reliability can be expected to be between .60 to .80. Najimy (1981) feels that holistic ratings are useful even when two raters disagree as "worthwhile discussions usually ensue regarding the merits of the paper and what constitutes good writing.". (p. 7)

Holistic scoring invariably focuses on the positive aspects of a student's piece of writing rather than an analysis of errors. It is considered to be a useful method for scoring large numbers of writing samples.

DISADVANTAGES OF HOLISTIC SCORING

Students are not provided with any descriptive feedback about their writing when a holistic scoring method is used. Consequently this method is not diagnostic. Another potential problem with this method can arise from the use of the anchor paper. Although an essay may be rated as superior relative to the rest of the sample, it is possible that it may not be a well written paper in its own right. (Spandel and Stiggins 1980). Brown (1977) has noted the following: "It is possible that all papers at the top of the score are horribly written. They may be better than the rest, but still may be unacceptable to most teachers of composition." (Spandel & Stiggins 1980, p. 20) Finally this method is only as good as its raters. Raters must be very well trained in order to help ensure interrater reliability.

Holistic Scoring is not recommended for small groups, as smaller samples are difficult to score using this method.

2. Analytic Scoring

Analytic scales are used for examining specific features in any mode. These scales can be created to adapt to the needs of any writing program, as the examiner defines the criteria by which the papers will be scored. A list of approximately four to twelve features is developed for raters to use. Each feature on the list is given a ranking and is often weighted along a continuum from low to high (Bushman 1984). It is important that the criteria are well defined so that raters have a clear understanding of them before they begin scoring.

Diederich (1974) an acknowledged expert in analytic scoring developed an analytic scale in an effort to improve interrater reliability over the holistic method. The scale was based on a factor analysis of the holistic evaluations of first year college students conducted by experts from a variety of academic disciplines. He found the following factors to be of significant influence to a raters judgement in the ranking of a piece of writing; ideas, mechanics, organization, wording and flavor. The scale he developed follows:

	Low		Middle		High	
General Merit						
Ideas	2	4	6	8	10	
Organization	2	4	6	8	10	
Wording	1	2	3	4	5	
Flavor	1	2	3	4	5	________
Mechanics						
Usage	1	2	3	4	5	
Punctuation	1	2	3	4	5	
Spelling	1	2	3	4	5	
Handwriting	1	2	3	4	5	________
						________

(p. 54)

Diedrich also includes a scoring guide describing the general traits necessary to achieve the ranking on the scale for each characteristic listed. The following is the description for "organization":

2. Organization

> High: The paper starts at a good point, has a sense of movement, gets somewhere and then stops. The paper has an underlying plan that the reader can follow: he is never in doubt as to where he is or where he is going. Sometimes there is a little twist near the end that makes the paper come out in a way that the reader does not expect, but it seems quite logical. Main points are treated at greatest length or with greatest emphasis, others

> in proportion to their importance.
>
> Middle: The organization of this paper is standard and conventional. There is usually a one-paragraph introduction, three main points each treated in one paragraph, and a conclusion that often seems tacked on or forced. Some trivial points are treated in greater detail than important points and there is usually some dead wood that might better be cut out.
>
> Low: This paper starts anywhere and never gets anywhere. The main points are not clearly separated from one another, and they come in a random order - as though the student had not given any thought to what he intended to say before he started to write. The paper seems to start in one direction, then another, then another, until the reader is lost.
>
> Diederich (1974) p. 56

Spandel & Stiggins (1980) suggest that this method is more suitable for individual or small group testing rather than with larger groups of students.

ADVANTAGES OF ANALYTIC SCORING

An analytic scoring method provides a description of a student's strengths and weaknesses on a particular piece of writing and feedback about the quality of his or her work. Therefore, it can be used diagnostically for both assessment and teaching. A student and a teacher can examine a paper for areas that may require additional attention. Spandel & Stiggins (1980) explain that the great advantage to analytic scoring is "that it provides potential in trait by trait analysis of a student's writing proficiency". (p. 23)

Cooper (1977) sees this method as very useful for "program evaluation or for research on methods of teaching writing as an analytic scale can serve as a guide to raters choosing the better of each students paired pre- and post-essays on matched topics of the same kind of discourse." (p. 17)

DISADVANTAGES OF ANALYTIC SCORING

Analytic scoring is more time consuming than holistic scoring as the rater must look for specific traits in the writing sample. Spandel and Stiggins (1980) point out that it may require up to three times as long to score a paper using an analytic method rather than a holistic method. Freedman (1982) points out that there is no evidence to suggest that interrater reliability is any better on an analytic scale than it is on a holistic scale. In fact, Hirsch (1977) felt that the scale developed by Diederich (1974) caused more room for disagreement among raters than the holistic method. Another criticism is that it is too restrictive a method due to the specificity of the criteria that the raters follow. Cooper (1977) suggests that the main problem of analytic scales "is that they are not sensitive to the variations in purpose, speaker role, and conception of audience which can occur in pieces written in the same mode." (p. 14) Najimy (1981) is concerned that the analytic method has the potential to be negative - focusing on errors and flaws rather than strengths. He also feels that this type of assessment can cause "the papers total effect to be subordinated to consideration of its parts". (p. 10) In addition, Freedman (1982) found that subscores on an analytic scale usually correlated very highly with one another so that "they yield little information beyond what the single holistic score offers." (p.40)

3. Dichotomous Scale

This scale is made up of a number of statements describing the specific features the test designer wishes to have assessed. The rater studies the piece of writing to ascertain whether it contains the features outlined in the scale and simply answers yes or no beside each statement. Cooper (1977) provides an example of a dichotomous scale for assessing a biography/autobiography:

DICHOTOMOUS SCALE

Reader____________ Paper _________

	YES	NO	
I.	_____	_____	Author's role consistent
	_____	_____	Interesting personal voice
	_____	_____	Theme clearly presented
	_____	_____	Background rich and supportive
	_____	_____	Sequence of events clear
	_____	_____	Central figure fully developed
II.	_____	_____	Wording unique and developed
	_____	_____	Syntax correct and varied
	_____	_____	Usage errors few
	_____	_____	Punctuation errors few
	_____	_____	Spelling errors few

TOTAL Yes______ (Page 24)

The advantages and disadvantages of the dichotomous scale are basically the same as those for the analytic scale. It has been suggested that the dichotomous scale is somewhat simpler to use than the analytic scale because the rater simply has to establish whether the feature is present in the piece of writing or not.

4. Primary Trait Scoring

The philosophy behind primary trait scoring is described by Millis (1980): "writing is done in terms of an audience and can be judged in view of its effect upon the audience". Thus, this type of analysis has to be specific to each assignment. The examiner determines in advance the most important features to be included in a piece of writing in order for it to achieve its purpose. Spandel and Stiggins (1980) explain that this type of assessment has to be "rhetorically and situationally specific". They present the following example:

> Suppose a student were asked to give directions for driving from his/her house to school. The primary trait might then be sequential organization, for any clear, unambiguous set of directions would necessarily be well organized, with details presented in a proper order. (p. 23)

In developing criteria for a primary trait analysis of a given writing assignment Odell (1981) suggests that the test designers consider questions suggested by the 1974 National Assessment of Educational Progress - Writing (NAEP-W) such as:

"Who is the audience; what characteristics are likely to be true of the audience? and in the light of those audience characteristics, what rhetorical strategies are most likely to help achieve the assigned purpose?"

ADVANTAGES OF PRIMARY TRAIT SCORING

Primary trait scoring can provide important information about specific aspects of a student's writing. Freedman (1982)suggests that this method can provide reliable scores upon which raters can agree. Once the traits to be scored have been established this method is easy for raters to use (Spandel and Stiggins 1980). Cooper (1977) feels that "Primary Trait Scoring is certainly the most sophisticated of the holistic evaluation schemes" due to the fact that the scoring guides used in this type of assessment "are constructed for a particular writing task set in a full rhetorical context." (p. 11)

DISADVANTAGES OF PRIMARY TRAIT SCORING

Primary trait scoring can be very time consuming in the initial stages of attempting to determine the essential traits to be evaluated in a writing sample. Another potential problem with this type of analysis is described by Odell (1981): "Some evaluators assume that children should have great latitude in determining the form, purpose and audience of their writing" and "primary trait scoring on the other hand, involves the assumption that writers must accept some constraints". He goes on to point out that some raters may penalize those students who "venture outside of the parameters of the given task or take an unusual perspective." (p. 125, 126) Finally, primary trait scoring does not necessarily provide information relevant to the quality of the writing sample. It does not evaluate for mechanical errors, cohesion or syntax. (Odell 1981). In fact, Freedman (1982) does not suggest using this method for those interested in the diagnosis and treatment of writing disorders as they "will need more detailed and different information from that which primary scores offer". (p. 41)

5. Syntactic Scoring

Breland (1983) describes this type of scoring as "a method of gauging syntactic maturity which is most often associated with the term T-Unit". A T-Unit is defined by Odell (1981) as "one main clause plus any subordinate clauses attached to it". (p. 120) In other words, a T-Unit is the minimum number of words necessary to form a sentence. For example:

> "I phoned my sister and she hung up, but she phoned me back and apologized."

This sentence contains three T-Units:

1. I phoned my sister
2. and she hung up
3. but she phoned me back and apologized.

According to Hunt (1977) the length of a T-Unit has a tendency to increase with age and growth in skill.

ADVANTAGES OF SYNTACTIC SCORING

Odell (1981) feels that "the great advantage of evaluating students syntactic fluency is that Hunt and others have provided a substantial amount of information about the sort of syntactic structures we may expect of writers at different age levels:. (p. 121). Breland (1983) states that the T-Unit "is empirically useful in describing changes that occur in the syntax of writers as they mature". Spandel and Stiggins (1980) report that a T-Unit method of assessment, combined with a holistic scoring method "is likely to reveal that the highest scored papers (i.e. those that appealed most to the readers) were in fact those with the most sophisticated use of T-Units". (p. 30)

DISADVANTAGES OF SYNTACTIC SCORING

It must be kept in mind that a T-Unit analysis does not provide comprehensive knowledge about a student's writing development. It measures only a single feature of a child's writing ability. Odell (1981) cautions testers to take into account the type of writing that they are assessing. He notes that some research is indicating a difference in a student's ability depending on the "writers purpose and audience". He goes on to say that the majority of research available on syntactic fluency does "not make any distinctions between different kinds of writing". (p. 121) Spandel and Stiggins (1980) also note that scorers have to be highly trained to conduct this type of analysis and it is often "time consuming and costly to conduct", especially with large groups. (p. 30)

Writing Tests Used in Special Education

Finally, in the description of tests there are two standardized tests often used in special education for the diagnosis of problems in written language. The first is the Myklebust Picture Story Language Test (PSLT) and the second is the Test of Written Language (TOWL). The descriptions of these tests follow:

1. Myklebust Picture Story Language Test (PSLT)

This test of written language was the first of its kind when published in 1965. Compton (1984) points out that "it served a critical need for a test of written language at its time". (p. 15)

The PSLT is generally administered to individual children, but can be given to groups. It was designed to measure the written language skills of children aged seven to seventeen. Children are asked to look at a single black and white photograph as a stimuli, and are asked to write a story about it. A manual entitled "Development and Disorders of Written Language, Volume 1" that inlcudes administration and scoring procedures, and printed record forms used for scoring are the other materials needed to adminsiter the PSLT. The PSLT measures:

(i) Productivity (the length of the writing sample) which includes counts of Total Words, Total Sentences and Words per Sentence.

(ii) Syntax (the correctness of the written expression) measuring word choice, morphology, punctuation, word endings and word order.

(iii) Abstract/Concrete scale (meaning) which includes five levels:

a) Meaningless language
b) Concrete/Descriptive

c) Concrete/Imaginative

d) Abstract/Descriptive

e) Abstract/Imaginative

Scores from the PSLT can be converted into age equivalents, percentiles and stanines.

Poteet (1978) examined the value of the PSLT in study looking at differences in written expression between learning disabled and non-learning disabled. Although he did not use all sections of the test (he omitted the Concrete/Abstract Scale), he questioned the usefulness of the PSLT for "an accurate and complete diagnostic appraisal". (p. 12) He also felt that the stimulus picture was outdated for contempory students and suggested that the PSLT is inappropriate for use above Grade Two. Anastasian (1972) and Perkins (1972) in the Buros Mental Measurement Yearbook have questioned the reliability, validity and the norming procedures used in developing the PSLT. Compton (1984) agrees with the previous authors and provides a thorough evaluation of the PSLT. She feels that there were inadequate norming procedures. The test was normed on school populations in only one midwestern state. The standardization of the test was also based on sampling only the odd ages from 7 to 17. Myklebust interpolated scores for the even ages.

There was also no evidence provided to support the authors contention that the PSLT was a valid test. In fact, Compton notes that there was no evaluation provided that examined the face validity of the test and asks "How motivating for example is the test picture in comparison with other pictures that might have been used." In addition, Compton questions interscorer reliability. She notes that Myklebust reports statistically significant test-retest reliability coefficients but does not provide data in support of his statement. Compton questions interscore reliability. Finally she suggest that scoring procedures for the PSLT are technical and require a great deal of time and training in order for the examiner to establish appropriate levels. Scoring portions of the test also call for subjective judgement calls in which the scorer compares the writing sample to examples and criteria provided in the manual (p. 75, 76)

2. Test of Written Language (TOWL) Hammill and Larsen (1978)

In developing the TOWL the authors contend that a student must acquire skills in five areas in order to be a successful writer:

a) mechanics - the motoric component of writing
b) production - sufficient quantity of writing produced in order to effectively cover the topic
c) conventions - the ability to correctly apply rules for punctuation, spelling and capitalization
d) linguistics - the proper use of vocabulary and grammar

e) cognition - "the ability to write logical, coherent and sequenced written products" (p. 8)

The TOWL was designed to measure these five "components" through use of objective subtests and a direct writing sample. The manual contains a chart outlining the subtests that make up the test and the skill areas test:

Components	Format	
	Contrived	Spontaneous
Mechanical		Handwriting
Productive		Thought Units
Conventional	Spelling Style	
Linguistic	Word Usage	Vocabulary
Cognitive		Thematic Maturity

Figure IV

The content and format characteristics of the TOWL subtests. Hammill and Larsen 1978 (p. 10)

The five major subtests that contribute to a Written Language Quotient (mean of 100 and standard deviation of 15) are:

(i) Vocabulary - a random selection of words used in the childs writing sample are scored according to rankings provided in the manual.

(ii) Thematic Maturity - the story is examined for content and the students ability to effectively communicate meaning.

(iii) Spelling - measures the student's ability to spell "regular and irregular words".

(iv) Word Usage - tests knowledge of grammar

(v) Style - tests knowledge of the rules for punctuation and capitalization.

The optional subtests are Handwriting - the examiner rates the child's cursive writing based on a scoring guide provided in the manual and Thought-Units. The examiner counts the "T-Units" contained in each student's writing sample.

The 1978 TOWL was standardized using 1,712 students from grades two through eight, whose ages fall between 8 years 6 months and 14 years 5 months. Students in the standardized group lived in nine different states across the United States.

The authors tested the internal consistency of three subtests: Style, Spelling and Word Useage at six age intervals and report internal consistency reliability coefficients of .80 or better for all but three of eighteen coefficients presented. Test - retest reliabiltiy coefficients were .80 or greater for all subtests except for Vocabulary or Thought Units. Consequently, the authors suggest that examiners interpret the results of these two subtests with caution. Interscorer reliability for subtests based on the written sample was also determined to be at a 76% agreement level or better. Phelps-Gunn and Phelps-Teraski (1982) also report that measures reported in the TOWL manual for establishing criterion-related validity and construct validity were good.

There are no reviews of this test in the Buros Mental Measurement books due to the recent publishing date. Compton (1984) however, has critiqued the TOWL and makes the following comments:

Strengths:

The TOWL provides a needed addition to the few standardized test instruments available for measurement of written language ability. The stimulus picture used in the TOWL is usually of interest to all ages of children and commonly elicits a good sample of their writing. The TOWL is easily administered (even to large groups) and scoring procedures are clear and Compton feels that it "is technically sound in terms of standardization and reliability". (p. 79)

Weaknesses:

Compton questions the usefulness of the Vocabulary and Thematic Maturity subtests. She feels that the scoring procedures for the Vocabulary subtest based on ranking words according to length seems less meaningful than "a system that indicates the types of words (parts of speech, common or unusual words) a student is currently using and not using". (p. 79) The standards used for scoring the Thematic Maturity subtest appear "arbitrary". A student can attain a high score for attributing personal names to the characters or including a title which "may have little to say about the writer's overall thematic maturity". (p. 79). She also feels that the spelling, word useage and style components of the TOWL would have been of more value if they were assessed directly from the child's writing sample. She notes that the validity of the TOWL has been questioned, as teachers often find the Written Language Quotient to be an inflated estimate of a childs writing ability, and additionally there is only one form of the TOWL which limits its usefulness for pre- and post-test purposes.

COMPARISON OF ASSESSMENT METHODS

In recent years there has been a great deal of interest and controversy focused on the uses and usefulness of objective and direct assessment methods for written language. As Stiggins and Bridgeford (1983) note "both language arts educators and educational testing specialists are well acquainted with the differences of opinion regarding the best way to measure writing proficiency". (p. 6)

One group of educators support the direct assessment method contending that only an actual sample(s) of a student's writing product will provide a reasonable measure of competency in writing. These educators criticize objective testing instruments for their lack of validity. The student is not asked to provide an actual piece of writing, therefore, an objective test can only provide a "proxy" measure of a student's writing ability. Phelps-Gunn and Phelps-Teraski

(1982) state that objective tests "do not directly maeasure what they directly evaluate: writing." (p. 245) Veal et al (1982) describes indirect tests as those measuring "approximations of this (writing) ability which are skills related to writing." (p. 290)

Even the backers of the direct method have a variety of opinions about the number and type of samples that a student has to submit for a valid and comprehensive evaluation of his or her skills. Researchers such as Moffett (1968), Britton (1975), Lloyd-Jones (1977), Freedman (1982) and Prater and Padia (1983) suggest that there is a great difference in a student's skill across various modes of discourse and the audience being addressed. Others suggest that numerous writing samples are not necessary. (Delves 1972).

Indirect test supporters, however, "argue that objective tests can provide much useful infomation and can do so more effectively and economically than writing samples" (Stiggins & Bridgeford 1983, p. 6). They in turn question the reliability of direct test measures criticizing them for "rater inconsistency and sampling bias". (Breland 1983, p. 4). Inconsistency in rating can occur when raters attribute a number of different scores to the same writing sample. Even one individual can score a single writing sample differently from one day to the next. These differences can occur for a variety of reasons such as the raters personal philosophy about the importance of different components in writing, some raters are more lenient than others and some raters tend to score the majority of papers near the average. (Breland 1983). Sampling bias can occur due to student inconsistency.

A student can produce writing samples of differing quality depending on a variety of circumstances from one occasion to the next.

Essentially the arguement narrows down to one of reliability or validity. Hirsch (1977) asks "what features of a writing assessment method would make it both reliable and valid?". He replies that "in practice, no valid method of writing assessment yet proposed has been truly reliable". (p. 180)

RESEARCH EXAMINING THE USE OF DIRECT AND INDIRECT ASSESSMENT METHODS

Studies conducted over the past years comparing direct and indirect testing methods have obtained mixed results and conclusions:

Rentz (1984) originally used both a writing sample and an objective test in developing an appropriate assessment device for college students for Georgia's University system in the 1970's. He notes that:

> "After two years, we abandoned the objective test and it was hardly noticed. The writing sample provided a measurement far superior to the objective test on the aspect of a testing program I consider most important: credibility." (p. 4)

Breland and Gaynor (1979) conducted a study comparing holistic scores on the written language samples of over 2,000 college students, to measures from the Test of Standard Written English (TSWE). They concluded that "direct and indirect assessments of writing skill - as commonly conducted - tend to tap similar skills." (p. 127) They suggest the possibility of using a combined approach.

Veal & Hudson (1983) compared holistic ratings of the writing samples of approximately 2,400 grade 10 students enrolled in Georgia school systems to scores from the language arts sections of wellknown objective tests. They describe correlations ranging (.70, .42, .40, .57)

Stiggins (1982) reviews six studies conducted between the years 1976 and 1982 that compared direct and indirect assessment methods. Correlations between the two on these studies range from .20 at the lowest to .76 at the highest. He concludes that "research on the correlation between the two approaches reveals a consistent and relatively strong relationship at various educational levels." (p. 101)

Culpepper and Ramsdell (1982) compared the test scores of 202 freshman college students at Michigan State University from a multiple choice objective writing test and an essay examination. Their study "indicated that the objective examination was the more effective and informative instrument for estimating the students writing skills, although the essay test could be useful in evaluating students whose grades lie on the cut off points for different levels of classes." (p. 297). In a well known study conducted by Godshalk, Swineford and Coffman in 1966 data was collected for 646 students enrolled in grade twelve from across the United States. Every student wrote on five different topics and completed six multiple choice type tests and two "fill in the blank" type tests. Their conclusions were that "the combination of objective items (which measure accurately some skills involved in writing) with an essay (which measures directly, if somewhat less accurately, the writing itself) proved to be more valid than either type of item alone". (p. vi)

Hogan and Mishler (1980) noted that most of the comparisons of direct and indirect writing tests had been performed at the college level. They attempted to study the relationship between these measures at an elementary and junior high level. They used a standardized test battery and compared the scores from all academic areas to those scored on the writing samples. They found the highest correlations to be between the writing sample and the language score. The reading test had the second highest correlation with the writing sample. Their conclusions were that "the language test (in the Surey Battery) does relate more highly to free-writing performance than do objective tests in other curricular areas, thus, at least partially allaying the suspiscion that we are dealing here with nothing more than a general verbal or overall educational development factor." (p. 226). The correlation found at all grade levels were relatively similar to those reported at college levels.

Moss et al (1982) compared objective and direct testing methods with students in grades four, seven and ten. They found lower correlations at grade four and seven than those at the grade 10 level. The authors suggest that there is a "possibility that the correlations may be lower at lower grade levels. It is intuitively reasonable that as skills are developing they may be more fragmented with non-uniform development in all areas. This could result in lower correlations among measures of language skills that tap different aspects of those skills." (p. 47).

It is obvious that there are a number of options and opinions about testing methods in written language. Phelps-Gunn and Phelps-Teraski (1982) state that "currently there is no single test that evaluates writing from its generation to its final proof reading requirement." (p. 243). Some researchers and educators are suggesting that a combination of a direct and indirect assessment method may be the solution. (1979 Alberta Minister's Advisory Committee on Student Achievement); (Godshalk et al 1966); (Breland and Gaynor 1979).

Regardless of personal philosophy however, it will be important and necessary to select or develop an appropriate test instrument after careful consideration about the purpose of the evaluation i.e. what type of information does the examiner need?: What decisions are going to be made based on this assessment?: practical considerations such as cost effectiveness, size of the group to be tested etc.; and of course technical considerations concerning the relaibility and validity of the test instrument. Brown (1983) suggests that educators interested in arriving at an appropriate assessment device ask themselves the following questions about the "intended use of a test":

1. Do you primarily want to predict the future writing success of your students?
2. Do you seek to place students at certain levels or to excuse them from certain courses?
3. Do you want to diagnose writing problems?
4. Do you want to establish mastery?
5. Do you compare your students, as a group, to others?
6. Do you primarily want to describe your students' writing?
7. Do you want to measure growth in student writing skills?
8. Do you want to conduct any long-term research on writing?
9. Do you expect a test to teach as it tests?
10. Do you want all of the above? (p. 106)

Finally, Spandel & Stiggins (1980) emphasize the uniqueness of an individual's written expression and the necessity to understand a student's needs and problems in the evaluation of his or her writing:

> There is not now, nor will there ever be, a single best way to assess writing skill. Each individual educational assessment and writing circumstance presents unique problems to the developer and user of writing tests. Therefore, great care must be taken in selecting the approach and the methods to be used in each writing assessment. Methods used in one context to measure one set of relevant writing skills should not be generalized to other writing contexts without very careful consideration of writing circumstances. (p. 5)

E. Written Language Difficulties and Disorders

Poplin et al (1980) states that "the role of written language in school success is even more significant for the learning disabled child". They feel that the development of competence in writing is of the utmost importance to a learning disabled child's "survival" if special educators are committed to the integration of this population into the mainstream. Cicci (1983) also notes that if written language problems are not focused on and identified they can cause a great deal of distress for the students experiencing these difficulties:

> Some of the most debilitating and puzzling conditions seen in children and adolescents are those of unidentified written language disorders. The students are regarded as unmotivated, lazy and careless. They may have serious problems in regard to not completing tests or homework assignments. (p. 208)

Barbara Cordoni (1978) notes that "writing is a highly complex process requiring skills that are not posessed by all students" (p. 1). This does not mean however, that the teaching of written expression should be ignored simply because children are experiencing difficulty. Unfortunately, this has often been the case for children with learning problems. Special education has focused on the teaching and study of writing to an even lesser extent than regular education. Reid (1983) states that "many teachers have customarily avoided writing assignments for the learning disabled, thinking that writing was something the students just couldn't do" (p. vii). Silverman et al (1981) reviewed a number of books pertaining to the study and teaching of children with learning problems. They found that there was only "minimal coverage" or literally no mention of written expression difficulties or their remediation (p. 92). They also cite research conducted by Lernhardt, Zigmond and Cooley (1980) in which 105 learning disabled students were studied in order to record the amount of time the students spent on the various subject areas. In thirty hours of time studied over a period of twenty weeks it was found that the children were involved in tasks requiring writing for an average of 25 minutes per every 270 minute day. Seventy five percent of this time was spent in "copying" rather than expressive writing (p. 97). As previously noted, the remediation of reading is generally found to account for the majority of time devoted to the programs for learning disabled students.

Written expression difficulties came into focus only recently in the United States when they were incorporated into the U.S. Federal Register (1977) as one of seven specific areas in which a child could have a disorder if there was a substantial difference between expected levels relative to a childs age and intellectual ability. In the Province of Alberta a learning disabled child is defined as: a child of average or above average intelligence with normal vision and hearing, who has a "significant discrepancy between estimated learning potential and actual academic performance, which may be evidenced in impaired ability to listen, think, speak, read, write, spell or do mathematical calculations" (Alberta Education 1981).

As research extends into the investigation of learning problems in written expression, there are, again, various theories concerning their etiology. One suggestion is that deficits in writing are the result of underlying oral language or reading problems. For example, Rosenthal (1970) and Vogell (1974) suggest that an examiner look very carefully at the oral language of a learning disabled child, even if his or her spontaneous speech appears to be at or above age level. Wiig (1976) agrees with the observations and suggests that:

> Learning disabled students are able to compensate for linguistic deficits when the semantic and/or linguistic constraints are minimal; however, when either or both constraints are imposed their linguistic abilities prove inadequate. (p. 196)

Myklebust (1973) suggests that severe and subtle disturbances in either oral language or reading can affect written language ability and that the person must be competent in reading before he can learn to write. He cautions professionals to begin looking for a childs written language problems beginning at the bottom of his heirarchy, that is; "the child speaks only after he comprehends, only after he has learned the words to speak." Likewise, "he writes only after he can read, only after the read word has been learned" (p. 16). He is constantly reminding professionals in the field that "input preceeds output".

Others surmise that students can have intact reading and oral language skills and still have problems that are specific to written language (Vallet 1969). Johnson (1967)an associate of Myklebust's agrees that this is possible and describe other factors that influence the ability to write. One disorder that she describes is dysgraphia, in which a child cannot imitate the motor patterns necessary for writing, even though he or she can read and speak. Another disability she describes is that of "revisualization", which is affected by visual memory problems. The child can speak, read and copy, but he cannot remember what words or letters look like. The last of the disorders described is that of "disorders of formulation and syntax". It is interesting in the respect that children who suffer with problems in this area often appear to have well developed, intact, oral language skills:

> Children with disorders of written formulation can have superior auditory language, good reading comprehension and the ability to copy the printed word, but they cannot express ideas in writing (p. 228).

In his studies using the Picture Story Language Test (1965), which compares transcriptions of oral and written stories, Myklebust notes that the "total word count on the written story is often less than half of the oral story and the Abstract/Concrete scores tend to be lower" (p. 228) He notes that disorders of formulation and syntax can vary "both in nature and severity" (p. 228). While with some children, the most significant problem is an ideation and productivity, others have problems that are primarily syntactical in nature. With most children, however, both are present.

> Children with a disturbance in ideation and productivity are limited in output and use more concrete language. They may spend several minutes before initiating a simple sentence, and finally give up...They can tell stories or

> relate incidents but they cannot translate thoughts in written symbols... A disturbance of written syntax can occur in conjunction with a disorder in ideation or isolation ... Children who have only written syntax difficulties have fluent use of the spoken word. They make errors in the written form that are not made in spoken. The most frequent errors are word omissions, distorted word order, incorrect verb and pronoun useage, incorrect word endings, and lack of punctuation (p. 229).

Wallace and McLoughlin (1979) have also described this type of problem:

> A major difficulty experienced by the child with written expression problems is the inability to organize thoughts into proper form for written communication. Many children who can orally articulate their thoughts concisely are totally unable to communicate in a logical writing style (p. 202).

Cruickshank (1980) sees disorders of syntax and formulation as the "most baffling of learning disabilities and the most perplexing to secondary educators" (p. 245).

> Because the disorder usually occurs in students who are fluent in spoken language and reading, the alarm for assistance is often sounded late, if ever. This is a very typical problem and is found in many highly intelligent youths with learning disabilities (p. 245).

A third type of writing disability that is discussed in the literature is not the result of a specific learning disorder, it is caused by lack of appropriate instruction and practice in writing.

Litowitz (1981) calls this an "instructional deficit" problem (p. 74). Shaugnessy (1977) began to work with students in New York who were entering college after graduating from high school with their diplomas. A large portion of these students exhibited severe problems with written expression and were by college standards "illiterate". The various colleges began to develop "basic writing" programs for these students and Shaugnessy (1977) concludes that the majority of these students had no underlying disorders, they simply lacked the practice and exposure to adequate instruction necessary for the development of competency in writing:

> BW (Basic Writing) students write the way they do, not because they are slow or non-verbal, indifferent to or incapable of academic excellence, but because they are beginners and must, like all beginners, learn by making mistakes.

She notes that all students come into the programs with unique needs and attitudes, but she suggests that progress can be made if teachers working with basic writing students will carefully analyze a student's writing "by trying to understand the logic of their mistakes in order to determine at what point or points along the developmental path, error should or can be a subject for instruction" (p. 13).

Written language in its complexity, creates many new problems for the learning disabled student that must also be kept in mind in the planning of a remedial program. Litowitz (1981) for example, notes that "underlying processing capacities of attention and memory, as well as levels of cognitive and logical functioning, are required in additional ways" (p. 86) for written language. Johnson and Myklebust (1967) caution professionals by stating "not all disorders at lower levels will surface in writing" (p. 195), however, they suggest that writing may well prove to be of benefit in remediating other disorders.

It is important to emphasize at this point that, all children including those with learning problems and disabilities are individuals with often unique and complex factors influencing their learning ability. Poplin (1984) summarizes this point well:

> After over a decade of accumulated research findings, perhaps only one undeniable "fact" has emerged - learning disabilities are not a single handicapping condition with an easily defined set of characteristics. That is, learning disabled children are as different from one another as they are from their normal peers. Actually more variation has been found within the category of learning disabilities than outside this population. There is simply no homogenous group of learning disabled persons (p. 131).

The need for more research dealing with written language difficulties however, cannot be over-emphasized. It is possible for writing to become an integral part of a learning disabled childs life if the problems they encounter can be identified and their remedial programs include an emphasis on the development of competency in writing.

RESEARCH ABOUT WRITTEN EXPRESSION IN SPECIAL EDUCATION

Morris and Crump (1982) examined the syntax and vocabulary development from the writing samples of 72 learning disabled and 72 non-learning disabled students from four age groups ranging from nine to fifteen years of age. Their findings were that the T-Unit length scores for the two groups did not reveal any significant differences. There were however, indications that indeed the average T-Unit length increased as age increased. They also used another measure of syntactic maturity entitled the Syntactic Density Score (SDS) which was developed from ten different variables. This instrument revealed significant differences between the groups. Non-learning disabled students achieved a greater average SDS at each age level than learning disabled students. The authors suggest that the SDS may be more "sensitive to the qualitative differences in writing" than the T-Unit measure (p. 170). Measures for vocabulary development also indicated significant differences between non-LD and LD at each age level. They found that LD students "employ less variety of word types in their writing" (p. 170).

McGill-Franzen (1979) examined a writing sample of a seventeen year old, learning disabled student. The sample was examined for syntactic maturity using a T-Unit Analysis, then it was scored using a Primary Trait method of assessment, and finally it was examined for the intellectual strategies used as outlined by Odell (1977).

It was suggested that on first glance most would deem the piece of writing as totally illiterate. The author found however, upon closer examination, if the mechanics were disregarded, the student was reasonably mature in his ability to express ideas in writing: "Besides the obvious deficiencies in spelling, punctuation and capitalization, this student is conceptually, and linguistically competent in the communication of his ideas" (p. 80), suggesting that one should examine the writing of L.D. students for strengths when diagnosing and remediating learning problems in written expression.

Poteet (1978) conducted a study examining the differences in the written language of 85 learning disabled and 125 non-learning disabled elementary school children. He also investigated the oral expression skills of the learning disabled sample. He found that while both the LD and non-LD students made the same types of errors, the LD group wrote less in terms of words and sentences, and they made "significantly more errors in ommissions of words and in punctuation" (p. 10). The review of the oral expression of LD students revealed that they made a number of errors including additions, substitutions and ommisions of words and word order errors. Poteet suggests that writing programs for the learning disabled should centre on oral language development in the early grades and on exercises for helping to increase the production of words and sentences in the upper grades.

Moran (1981) examined the writing samples of 26 learning disabled and 26 non-learning disabled (defined as students of average intelligence with no diagnosis of a learning diability, who are receiving no special services and are failing at least one academic core course with a score below the 33rd percentile on a recent achievement battery). The writing samples "were analyzed for syntactic maturity productivity and word selection" (p. 271) and for grammar and mechanics. It was found that there was no significant differences between the groups with the exception of spelling performance, which was "significantly different in favor of the low achievers" (p. 278). The authors indicate that their findings confirm previous research results that lowered spelling scores are characteristic of learning disabled students and suggest that spelling performance may have some implications for screening.

Poplin, Gray, Larsen, Banikowski and Mehring (1980) conducted a study examining the written expression of 99 learning disabled and 99 non-learning disabled students from grades 3 - 4, 5 - 6 and 7 - 8 using the Test of Written Language (TOWL) as a measure of written expression ability. They found that overall, the learning disabled children scored significantly lower on the TOWL than the non-learning disabled students. They indicated that the scores become increasingly discrepant in the LD group as the grade level increased. They also found that while scores on the Vocabulary and Thematic Maturity subtests were lower for the LD group in compairson the non-LD group, "these means did not at any grade level fall below one standard deviation from the norm" (p. 52). All LD students however, were at least one standard deviation below the norm on the spelling test and all but the grade 3 - 4's were one standard deviation below the norm on the Word Useage and Style subtests. Based on these results, the authors suggest that learning disabled students appear to have more difficulty with the mechanical aspects of writing rather than with the more "conceptual tasks" involving ideation and conveyance of meaning" (p. 52) They further suggest that writing programs for learning disabled students should initially place more focus on the "meaningful aspects" of writing and less focus on the mechanical components of writing in order to develop "confidence and positive attitudes toward writing activities before the more difficult and less meaningful activities are introduced" (p. 52). Finally the authors point out that it is interesting that the learning disabled students scores were significantly lower on subtests of the TOWL that employ a "contrived format". They question whether the information provided from contrived formats is as useful a measure of writing ability as a writing sample. They also pose the question "are learning disabled children less able to take contrived tests?" (p. 52).

It should be evident from this review that, due to its complexity, the study of written expression is not now, nor will it ever be, a clearly defined language process. There continues to be a baffling array of variables that could affect written expression, skill development and an equal variety of opinions about the process of writing, its relationship to other language areas and the assessment of writing ability. Writing has been significantly neglected particularly in the area of learning problems. Only recently it became apparent that there was a high incidence of children experiencing difficulty with written expression. Reasons accounting for this include the focus on the remediation of reading and the lack of adequate assessment methods for diagnosing strengths and weaknesses in writing. This study therefore, is in part, an attempt to provide more information about the learning problems that affect the composing ability of children. The more specific research questions follow:

F. Research Questions

Research Question 1

How do reading scores on the Gates McGinitie and CTBS correlate with the Written Language Quotient on the Test of Written Language?

Research Question 2

How do the language scores on the CTBS correlate with the Written

Language Quotient on the Test of Written Lnaguage? A related question is whether these correlations are higher or lower than reading correlations?

Research Question 3

How do the teachers informal rankings of children's writing abilities compare to rankings on the Test of Written Language?

Research Question 4

What percentage of children in a school population appear to be experiencing difficulty as compared to their peers, based on the results of the Test of Written Language?

Research Question 5

Do children who are measured to have writing difficulties from the Test of Written Language also have difficulties in oral language and/or reading?

Research Question 6

Do children who are measured to have writing difficulties from the Test of Written Language have anything in common on a WISC-R profile?

Research Question 7

What specific areas of writing appear to be the most difficult for children experiencing difficulty in writing?

Research Question 8

Is the Test of Written Language a useful test for identifying children with writing problems and for identifying strengths and weaknesses in writing? A related question is whether the Test of Written Language is a valid test?

CHAPTER III

METHODOLOGY

This chapter provides an account of the study and includes a description of the test instruments employed, the sample, collection of data and data analysis procedures.

A. Description of the Test Instruments

The Test of Written Language (TOWL)

As described in Chapter II, the Test of Written Language was written by Donald D. Hammill and Stephen C. Larson in 1978. It is reported by the authors to be a useful instrument for:

1. Identifying students who may require remedial help.
2. Providing a profile of a student's strengths and weaknesses in writing.
3. Measuring the progress of a child who is already enrolled in a remedial program.
4. As a research tool to study students writing ability. (p. 5)

According to the authors, the test was developed for two major reasons:

1. "to provide a well designed and normal instrument for evaluating writing since few such instruments exist, and
2. to provide an alternative to the Myklebust Picture Story Language Test (PSLT) (Phelps-Gunn and Phelp-Teraski 1982 p. 257) since

there is substantial documented evidence questioning the reliability and validity of the test.

The test is designed to include both indirect and direct testing measures. Children are asked to provide a spontaneous writing sample after examining three sequence pictures based on a space story theme.

For the purpose of this study the following subtests were scored:

1. Vocabulary - Twenty five words were selected at random from the child's writing sample. These words are then assigned a value from zero to eight according to a word list provided in the manual. This list was developed from a survey of the incidence words appearing in newspapers, student workbooks, basal readers, etc. The raw score is derived from the total sum of the scores credited to each of the twenty-five words.
2. Thematic Maturity - This subtest attempts to measure coherence, organization and unity in the student's writing sample. The sample is scored according to a list of twenty standards established by the authors, e.g. character development, use of dialogue, etc.
3. Spelling - This subtest is an abbreviated version of the Test of Written Spelling (Larsen and Hammill 1976). Students are asked to write twenty five words. The words were selected from recognized

basal spelling series used in the United States.

4. Word Useage - This subtest uses a Cloze method to evaluate a student's grammatical knowledge (plurals, tenses, etc) e.g. "The hungry dogs have ______ all the food."
5. Style - In this subtest, students are asked to rewrite and correct sentences applying rules for capitalization and punctuation.

The scores from each subtest can then be converted into Scaled Scores, and Age Equivalents. The total sum of the scaled scores from the above subtests then forms a score entitled the Written Language Quotient. (100 is an average Written Language Quotient score with a standard deviation of 15). The test provides Scaled Score Equivalents for children ages 8 years 6 months through 14 years 5 months.

Test of Adolescent Language - TOAL - written by Donald D. Hammill, Virgina L. Brown, Stephen C. Larsen and J. Lee Wiederholt (1980)

The manual of the TOAL lists four major uses for this test:

1. Identification of students who are behind their peers in language proficiency and may require remedial assistance.
2. For profiling a student's strengths and weaknesses in language

skills.

3. To establish growth in a student's language skills in order to determine the usefulness of a remedial program.
4. To be used as a research tool for the study of adolescent language behaviour. (p. 1)

The authors developed the TOAL as an attempt to provide a test for assessing the language skills of older children, which they contend has not been available for this population until the TOAL was developed.

The test is composed of the following subtests:

1. Listening/Vocabulary - This subtest contains 28 items. The examiner reads a word to the student and he/she must choose from four pictures the two that are closest in meaning to the word presented. e.g. "crane" - the student must select the picture of the machine and the bird.
2. Listening/Grammar - there are 35 items in this subtest. The student listens to three sentences provided by the examiner and chooses two sentences that mean essentially the same thing. e.g.
   A. Do not begin until the signal sounds.
   B. The signal will not sound until you begin.
   C. Wait for the signal before you begin.

The authors attempted to design sentences that mainly differed in terms of their grammatical characteristics but were controlled for their vocabulary content.

3. Speaking/Vocabulary and Writing/Vocabulary - In each of these two subtests, students were asked to use (in verbal and written form) a specific word in a sentence that illustrates their understanding of its meaning.

4. Speaking/Grammar - In this 25 item subtest the student is asked to listen carefully to a sentence provided by the examiner and repeat word for word what was said. The sentences become longer and more grammatically complex. e.g. If I were to run the race that fast, I would become very tired.

5. Reading/Vocabulary - The student is asked to read three words and then choose two words from a list of four that are the most nearly related to the original three. e.g. The three words are Clang, jingle, creak and the student chooses two words from:

   a. juicy
   b. graze
   c. gurgle
   d. rustle

6. Reading/Grammar - This is a twenty item subtest in which the student reads five sentences and chooses two that are the most

similar in meaning. e.g.:

a. Dogs play all the time.
b. My new dog is spotted.
c. Play with the dog.
d. The dog is playful.
e. The happy dog is here.

Again the vocabulary in these sentences is controlled, but the syntax is different in them.

7. Writing/Grammar - Students are provided with a number of short sentences and are asked to write one sentence from them that includes all of the necessary components from the original sentences. e.g. Samantha had a picnic. It was last Friday. It was after school. This can be combined into: Samantha had a picnic last Friday after school.

Raw scores from each subtest can be converted into scaled scores. The sum of the scaled scores from all eight subtests forms an Adolescent Language Quotient (ALQ). Certain combinations of subtests can also be added together to form quotients for the following areas: Listening, Speaking, Reading, Writing, Spoken Language, Written Language, Vocabulary, Grammar, Receptive Language, Expressive Language. The test was designed for children between the ages of 11 years 0 months through 18 years 5 months.

The Test of Language Development - Intermediate (TOLD-1)

This test was written by Donald D. Hammill and Phyllis L. Newcomer in 1982. The authors describe four major uses of the TOLD-1 in their manual:

1. To identify children who may be experiencing difficulty in language proficiency.
2. To provide a profile outlining a child's strengths and weaknesses in language skills.
3. To assess a student's progress in language during or following a remedial program.
4. To be used as a research tool for the study of a child's language behaviour.

The authors contend that the test was developed due to "an increased demand for well-constructed standardized test for assessing spoken language." (p. 1) (Hammill and Newcomer 1982)

The test is divided into the following subtests: (all subtests are verbally presented by the examiner and spoken answers are also required of the students).

1. Sentence Combining - In this 25 item subtest, students are asked to combine two simple sentences presented by the examiner to form a compound sentence. The student is instructed to use as few words as possible in his/her sentence. Each sentence must contain all the essential components contained in the two sentences. e.g. She picked an apple. She ate and apple.; this can be combined into: She picked and ate an apple.

2. Characteristics - The student listens to 50 statements presented by the examiner and determines whether they are true or false, e.g. "All fish are trout: All beef is meat". etc.

3. Word Ordering - The examiner presents a progression of words in random order and asks the student to organize them into a "complete, correct sentence" (Hammill and Newcomer 1982, p. 4) e.g."to, ready, go, you are" to form "Are you ready to go?".

4. Generals - On this subtest the child must identify the category or relationship between three words presented by the examiner, e.g. "igloo, teepee, palace", the child must respond with "houses, places where people live", etc.

5. Grammatic Comprehension - Forty sentences are read to the student and he/she is asked to determine whether the sentences are grammatically correct. e.g. "Mary and me went to the movies."

The above subtests are designed to measure both expressive and receptive language skills. Standard scores from specific combinations of the subtests are combined to form a Spoken Language Quotient (total of all five subtests); a Listening Quotient; a Speaking Quotient; a Semantics Quotient and a Syntax Quotient. All composite quotients have a mean of 100 and a standard deviation of 15. The test was designed to assess children whose chronological ages fall between 8 years 6 months and 12 years 11 months.

The TOLD-1 was standardized using 871 students from thirteen states in the United States. The authors report internal consistency coefficients of .90 or better for 83% of the subtest and composite scores at four age levels (using a coefficient Alpha formula). They also report correlations of .80 or better in determining retest stability.

The authors also extensively defend the content, criterion-related and construct validity of the TOLD-1 in their manual.

Gates - MacGinitie Reading Tests (Canadian Edition) - written by Walter H. MacGinitie (1978)

The authors contend that the Gates, MacGinitie Reading Tests can be used for establishing: "appropriate instructional levels for individual students who need additional or special instruction, in making decisions about grouping of students, in evaluating programs, in counselling students and in reporting to parents" (p. 1).

The test is composed of two subtests:

1. Vocabulary - Consists of forty-five items in which the student is to select from five words, the word which is closest in meaning to a "test word".

2. Comprehension - The subtest is made up of sixteen passages and students are asked to answer forty-three multiple choice questions about them.

Raw Scores can be converted into standard scores, percentile ranks and grade equivalents. A total reading score is derived from the sum of the raw scores from the two subtests. The tests can be administered to children from grades one to twelve.

The Gates - MacGinitie Reading Tests were standardized from the testing of 46,000 children throughout Canada. There were between 3,000 and 4,500 students tested at each grade level. The authors report Kuder - Richardson Formula 20 reliability coefficients of no less than .85 for each subtest and every grade level of the test.

Canadian Tests of Basic Skills (metric Edition) (CTBS) - edited by Ethel M. King (1974, 1977)

The CTBS was designed to provide an ongoing and all inclusive assessment of "growth in fundamental skills" (King 1977). It covers the following skill areas: vocabulary, reading, writing mechanics, study methods, and mathematics.

The subtests used for the present study were:

1. Vocabulary - Students are asked to select a word from a list of four which is closest in meaning to each highlighted word.

2. Reading Comprehension - Several passages are provided for the students to read. Following each passage students are asked to answer multiple choice questions about their content.

Language Skills Section:

3. Spelling - Students read words that may or may not contain spelling errors. They are asked to read each word and select words that are spelled incorrectly.

4. Capitalization - Students are presented with exercises in which they are to indicate whether there are any errors in

capitalization after each line in a passage.

5. Useage - This subtest attempts to measure basic knowledge of grammar, e.g. Tenses, subject and verb agreement, etc. Again, students are presented passages to read, and are to indicate if there are any "mistakes" after each line of print.

The CTBS provides percentile ranks and stanines for comparing a students progress with his or her peers, and grade equivalent scores. A Total Language Score is derived from the combination of raw scores from the Spelling, Capitalization and Useage subtests.

Schonell Graded Word Spelling Test

This test was developed by Dr. Fred Schonell and Dr. Eleanor Schonell in 1952. It is used extensively by special education teachers as a "quick" screening test for establishing a measure of a student's "spelling age" or grade level. The test was based on the Kent Spelling Tests from Britain. The authors do not provide any information regarding standardization, reliability or validity in their description of the test.

B. Description of the Sample

Students in the sample attended regular and special education programs within the Leduc Catholic School System during the 1982 - 1983 school year. All students were enrolled in grade levels three through seven. Two hundred and forty-two students were initially assessed using the Test of Written Language. From this sample, all those students who were performing at one standard deviation or more below their expected grade level (according to the norms of TOWL) were selected as the experimental group.

The experimental group consisted of twenty-nine children. Following the examination of the cummulative records and administration of the Wechsler Intelligence Scale for Children (Revised) (WISC-R) for those students who did not have a recent WISC-R score, seven students were found to be ineligible for the study group. Criteria for eligibility were the following:

Students must:

1. Score within the average range or above on the Full Scale Score of the WISC-R (a score of 90 or above).
2. Have no history of physical, speech or emotional anomalies.
3. Have English as their first language.

All teachers who participated in rating students from their classrooms were certified teachers. Of the eleven classrooms involved in the study, nine of the classroom teachers submitted ratings of their students written language ability.

C. Collection of Data

After the initial approval of the research project from the participating school, the Test of Written Language was administered to students in each classroom. Following the administration and scoring of the TOWL, parents of the children who formed the study group were requested to sign a school permission form consenting to individualized testing of their son or daughter. Subsequently, all test results were made available and explained to parents who requested to see them.

Each of the students cumulative records were then examined and WISR-R scores; (not prior to 1980) Gates-MacGinite Reading Tests scores (from the Fall 1982 administration); Canadian Test of Basic Skills scores (from the Spring 1983 administration); and historical data for ruling out physical, emotional and speech anomalies as well as ESL students were then collected. The WISC-R was then administered to those students who had no record of recent scores.

Those students who were then established to be qualified for the study group were then assessed using the Test of Language Development - Intermediate (for children in grades 3, 4 and 5); the Test of Adolescent Language (for those children in grades 6 and 7) and the Schonell Spelling Test (for all grades) either individually or in small groups. Standardized testing procedures were used and every attempt was made to administer tests in quiet rooms, free from outside disturbances. All of the test administrators were certified teachers with special education training and background in test administration.

Each classroom teacher of the students participating in the study was asked to rate each of the children enrolled in their classroom as "High", "Average" or "Low" based on the teacher's "overall, general impression of their student's written language abilities."

Teachers were asked to consider the following criteria in arriving at their ratings:

1. Expression of Ideas - The child's ability to clearly communicate meaning, inform and cover the topic at hand to the reader in a logical, flowing and organized manner.
2. Vocabulary useage, sentence structure and mechanics.

D. Procedures for Analysis of the Data

Means and standard deviations were calculated for all major tests used in the study. In attempting to examine the relationship of writing to reading, oral language, and intellectual functioning Pearson-Product-Moment correlations were calculated and measured for their level of significance. A Pearson-Product-Moment correlation was also calculated in looking at the relationship between teacher rankings of student writing ability and standardized test results of students writing skill levels.

Although the sample sizes were rather small in some instances the Pearson-Product-Moment correlation coefficient was used as a measure throughout the data. It was deemed the most suitable statistic for use in this study as sample size was taken into account in testing the significance of each correlation and a rank order correlation was unreliable with the smaller samples due to a substantial number of "tied ranks". Ferguson (1981) states "where a substantial number of tied ranks is found, the departure from the sum of squares of ranks from the sum of squares of the first N integers will be appreciable and the value of p will be thereby affected" (p. 383 - 384).

CHAPTER IV

DESCRIPTION AND INTERPRETATION OF DATA

Chapter IV includes a description of the data analyzed from the study as well as an interpretation of these results.

A. Description of the Data

Table 1 reports the means and standard deviations of scaled scores for each subtest and the written language quotient (WLQ) on the Test of Written Language for the entire population tested at each of the grade levels and the mean of the means from each grade level. It also includes the means for the sample group of students and the difference in scores between the large group mean and the sample group mean. The standardized means for subtests is 10 with standard deviation of 3 while the standardized mean for the WLQ is 100 with a standard deviation of 15.

Table 2 indicates the means, based on grade scores for all of the students at each grade level, the sample group means, the differences between the two groups at each grade level for each subtest and total grade score on the Gates MacGinitie Reading Tests.

TABLE 1

Means, Standard Deviations and Differences in Means between Groups on Test of Written Language

		Voc.	T.M.	S.P.	W.U.	Style	WLQ
Grade 3	$\bar{x}$ (n =53)	10.94	10.88	10.44	9.83	10.27	103.28
	S.D. (n=53)	1.94	1.92	2.38	1.89	2.26	10.29
Grade 4	$\bar{x}$ (n=434	10.29	9.95	10.41	9.41	9.79	99.70
	S.D. (n=43)	2.68	2.18	2.47	2.63	2.60	12.78
Grade 5	$\bar{x}$ (n=45)	11.28	10.04	10.78	10.59	10.09	104.02
	S.D. (n=45)	2.28	1.79	2.65	1.88	3.07	10.71
Grade 6	$\bar{x}$ (n=53)	10.77	10.17	11.04	10.98	10.05	104.27
	S.D. (n=53)	2.38	1.49	2.17	2.24	2.64	10.71
Grade 7	$\bar{x}$ (n=48)	11.19	9.79	10.25	10.29	10.14	102.31
	S.D. (n=48)	2.65	2.08	2.50	2.65	2.74	13.56
Mean of Grade Means Total Group n=242		10.90	10.17	10.58	10.22	10.07	102.72
Sample Group Means n = 22		8.72	7.86	6.68	7.22	6.77	82.41
Differences		2.18	2.31	3.90	3.0	3.30	20.31

Voc. - Vocabulary
T.M. - Thematic Maturity
S.P. - Spelling
W.U. - Word Useage
Style - Style
W.L.Q. - Written Language Quotient

TABLE 2

Means (Grade Scores) and Differences Between Groups on Gates MacGinitie Reading Tests

		Vocabulary	Comprehension	Total Score
Grade 3	x̄ n = 63	3.5	3.53	3.48
	x̄ n = 2	2.5	2.4	2.3
	Difference	1.0	1.13	1.18
Grade 4	x̄ n = 52	4.34	4.30	4.23
	x n = 4	4.10	4.30	4.13
	Difference	.24	.00	.10
Grade 5	x̄ n = 53	5.70	5.40	5.43
	x̄ n = 2	4.45	3.0	3.75
	Difference	1.25	2.40	1.68
Grade 6	x̄ n = 50	7.23	6.51	6.84
	x̄ n = 4	5.45	4.28	4.93
	Difference	1.70	2.23	1.91
Grade 7	x̄ n = 43	7.28	6.78	7.06
	x̄ n = 6	5.58	6.10	6.02
	Difference	1.70	.68	1.04

Table 3 describes the full group means, sample group means and differences between groups for the reading subtests, language subtests and total language grade scores on the Canadian Test of Basic Skills.
Table 4 reports the Pearson-Product-Moment correlations calculated between the total reading scores on the Gates MacGinitie reading tests and the written language quotients (WLQ) from the Test of Written Language for the entire sample tested at each grade level.
Table 5 presents the Pearson-Product-Moment correlations of the two reading subtests and the total language scores from the CTBS as compared to the Written Language quotients (WLQ) of the Test of Written Language for the total sample tested at each grade level.
Table 6 reports the Pearson-Product-Moment correlation calculated between the teacher rankings of childrens writing ability as compared to the rankings elicited from the Written Language Quotients (WLQ) and scales scores from the Thematic Maturity Subtest from the Test of Written Language for the entire population of students whose teachers participated in this portion of the study.

The rest of the tables consider the scores gained from working with the sample groups only:
Table 7 reports the means and standard deviations for subtest scaled scores and composite scores for the children in grades 3, 4 and 5 who

TABLE 3

Means (Grade Scores) and Differences Between Groups on Canadian Test of Basic Skills

	Voc.	Read. Comp.	Spell.	Cap.	Punct.	Use.	Total Lang.
Grade 3 $\bar{x}$ n = 63	4.09	3.99	4.30	4.15	4.02	3.83	4.05
$\bar{x}$ n = 2	2.80	2.50	3.10	2.50	3.50	2.60	2.95
Difference	1.29	1.49	1.20	1.65	.52	1.23	1.10
Grade 4 $\bar{x}$ n = 51	5.07	4.83	4.92	4.56	4.80	4.75	4.76
$\bar{x}$ n = 3	4.90	4.60	4.70	4.37	4.23	3.43	4.20
Difference	.17	.23	.22	.19	.57	1.32	.56
Grade 5 $\bar{x}$ n = 50	6.34	5.99	6.40	6.17	6.38	5.86	6.21
$\bar{x}$ n = 2	5.5	4.7	4.7	5.25	5.1	3.2	4.55
Difference	.84	1.27	1.7	.92	1.28	2.66	1.66
Grade 6 $\bar{x}$ n = 51	7.22	6.66	6.90	6.66	6.98	6.70	6.82
$\bar{x}$ n = 5	5.56	5.44	5.62	5.60	5.72	5.62	5.66
Difference	1.66	1.22	1.28	1.06	1.26	1.08	1.16
Grade 7 $\bar{x}$ n = 41	7.43	7.22	7.68	7.31	7.41	7.27	7.48
$\bar{x}$ n = 7	6.80	6.24	6.33	6.37	6.50	6.06	6.18
Difference	.63	.98	1.35	.94	.91	1.21	1.3

Voc. - Vocabulary
Read. Comp. - Reading Comprehension
Spell. - Spelling
Cap. - Capitalization
Punct. - Punctuation
Use. - Useage
Total Lang. - Total Language Useage

TABLE 4

Pearson-Product-Moment Coefficents of Correlation between WLQ (TOWL) and Gates MacGinitie Total Reading Grade Scores

TOTAL #	GRADE	CORRELATION COEFFICIENT
n = 52	3	.59 ***
n = 39	4	.48 **
n = 40	5	.49 **
n = 50	6	.60 ***
n = 43	7	.70 ***

Level of significance = ** $p < .01$ *** $< .001$

TABLE 5

Pearson-Product-Moment Coefficient of Correlation Between WLQ (TOWL) and CTBS Test Scores

TOTAL #	GRADE	DESCRIPTION OF SUBTESTS (CTBS)	CORRELATION COEFFICIENT
n = 55	3	Vocabulary	.52 ***
n = 55	3	Reading Comprehension	.55 ***
n = 55	3	Total Language Skills	.73 ***
n = 42	4	Vocabulary	.63 ***
n = 42	4	Reading Comprehension	.46 **
n = 42	4	Total Language Skills	.59 ***
n = 40	5	Vocabulary	.59 ***
n = 40	5	Reading Comprehension	.58 ***
n = 40	5	Total Language Skills	.74 ***
n = 51	6	Vocabulary	.73 ***
n = 51	6	Reading Comprehension	.70 ***
n = 51	6	Total Language Skills	.73 ***
n = 41	7	Vocabulary	.64 ***
n = 43	7	Reading Comprehension	.70 ***
n = 41	7	Total Language Skills	.77 ***

Level of Significance = * $p < .05$ ** $p < .01$ *** $p < .001$

TABLE 6

Pearson-Product-Moment Coefficient of Correlation Between Teacher Rankings of Student Writing Ability and Scores from the Test of Written Language (TOWL)

Total #	Score Used From Test of Written Language	Correlation Coefficient
n = 191	Written Language Quotient	.63 ***
n = 191	Thematic Maturity Scaled Score	.51 ***

Level of Significance ** $p < .01$ *** $p < .001$

TABLE 7

Group Means and Standard Deviation for Subtest Scales Scores and Composite Quotient Scores on the TOLD-I (grade 3, 4 and 5 sample group)

NAME OF SUBTEST OR COMPOSITE	MEANS FOR GROUP n=10	STANDARD DEVIATION
Sentence Combining	8.5	3.04
Characteristics	8.1	1.81
Word Ordering	6.9	2.47
Generals	9.7	1.62
Grammatic Comprehension	8.1	2.21
Spoken Language Quotient (SLQ)	88.1	10.66
Listening Composite	88.6	10.11
Speaking Composite	89.5	11.37
Semantics Composite	89.34	7.20
Syntax Composite	86.0	12.59

were administered the Test of Language Development - Intermediate (TOLD-I). The standardized means for subtest scale scores is are 10 with a standard deviation of 3 while composite score means are 100 with a standard deviation of 15.

Table 8 indicates the means and standard deviations for subtests and composite scores for the students in grades 6 and 7 who were administered the Test of Adolescent Language (TOAL). The standardized means and standard deviations are the same as those for the TOLD-I.

Table 9 presents the correlation coefficients between the composite scores on the Test of Language Development - Intermediate (TOLD-I) and the Written Language Quotient (WLQ) from the Test of Written Language for the study group at grades 3, 4 and 5.

Table 10 provides the correlation coefficients calculated from the comparison of the composite scores from the Test of Adolescent Language (TOAL) and the Written Language Quotient from the Test of Written Language for the study group at grades 6 and 7.

Table 11 presents the means for subtests, verbal, Performance and Full Scale Scores on the Wechsler Intelligence Scaled for Children - Revised. The standardized means for subtests are 10 with a standard deviation of 3 and 100 with a standard deviation of 15 for the "Scale" scores on the WISC-R.

TABLE 8

Group Means and Standard Deviation for Subtest Scaled Scores and Composite Quotient Scores on the TOAL (grade 6 and 7 sample group)

NAME OF SUBTEST OR COMPOSITE	N	MEANS FOR GROUP	STANDARD DEVIATION
Listening/Vocabulary	11	7.7	1.6
Listening/Grammar	11	7.2	2.7
Speaking/Vocabulary	12	9.0	1.8
Speaking/Grammar	12	9.5	2.7
Reading/Vocabulary	12	7.1	2.2
Reading/Grammar	12	7.5	1.5
Writing/Vocabulary	12	7.3	1.8
Writing/Grammar	12	7.7	1.2
Adolescent Language Quotient (ALQ)	11	85.27	7.98
Listening	12	84.50	10.01
Speaking	11	95.09	9.60
Reading	12	83.75	10.50
Writing	12	85.25	7.40
Spoken Language	11	89.09	10.49
Written Language	12	82.67	8.35
Vocabulary	11	85.45	5.53
Grammar	11	86.45	10.50
Receptive Language	12	82.25	9.24
Expressive Language	11	89.36	7.99

TABLE 9

Pearson-Product-Moment Correlations Between WLQ (TOWL) and TOLD-I Composite Scores Level of Significance * $p < .05$

TOTAL #	DESCRIPTION OF COMPOSITES ON TOLD-I	CORRELATION COEFFICIENTS
n = 10	Spoken Language Quotient	.033
n = 10	Listening Composite	.23
n = 10	Speaking Composite	-.09
n = 10	Semantics Composite	.23
n = 10	Syntax Composite	-.03

TABLE 10

Pearson-Product-Moment Correlations Between WLQ (TOWL) and TOAL Composite Scores

TOTAL #	DESCRIPTION OF COMPOSITES ON TOAL	CORRELATION COEFFICIENTS
n = 11	Adolescent Language Quotient	.70 *
n = 12	Listening	.49
n = 11	Speaking	.18
n = 12	Reading	.67 *
n = 12	Writing	.53
n = 11	Spoken Language	.66 *
n = 12	Written Language	.73 **
n = 11	Vocabulary	.66*
n = 11	Grammar	.67 *
n = 12	Receptive Language	.73 **
n = 11	Expressive Language	.44

Level of Significance * $p < .05$ ** $p < .01$

TABLE 11
Means and Standard Deviations for "Scale" Scores and Subtest Scores on WISC-R n = 22

	F.S.	VER	PER	I	S	A	V	C	D.S.	P.I.	P.A.	B.D.	O.A.	Co.
Means	100.95	101.2	105.8	7.57	10.29	9.43	9.71	10.29	8.19	10.62	11.61	10.48	10.90	10.24
S.D.	7.61	10.41	8.01	1.89	2.55	2.25	2.17	2.83	2.71	2.35	2.52	2.08	2.74	2.53

F.S. - Full Scale
VER - Verbal Scale
PER - Performance Scale

I - Information
S - Similarities
A - Arithmetic
V - Vocabulary
C - Comprehension
D.S. - Digit Span
P.I. - Picture Identification
P.A. - Picture Arrangement
B.D. - Block Design
O.A. - Object Assembly
Co. - Coding

TABLE 12

Pearson Product Moment Coefficient of Correlations Between
WLQ (TOWL) and WISC-R Scores for Sample Group
*.05 Level of Significance

TOTAL #	WISC-R SCALE	Correlation Coefficient
n = 22	Verbal Scale Score	.15
n = 22	Performance Scale Score	-.002
n = 22	Full Scale Score	.14

Table 12 reports the correlation coefficients in the comparison between the (WLQ) from the Test of Written Language and the Verbal, Performance and Full Scale Scores from the Wechsler Intelligence Scale for Children - Revised (WISC-R) for the entire sample group.

B. Interpretation of the Data

In examining the population of students from grades three through eight that were identified as having writing problems, there were initially twenty-nine students out of a total population of two hundred and forty two students tested. This represents 12.0 percent of this population. The twenty students selected for the study group with Full Scale I.Q's of 90 or above represented 9.1 percent of the total population. There were fourteen boys in the study group and eight girls. This is consistent with the literature suggesting that there are often more boys found to have learning problems than girls (Otto, McMenemy, Smith, 1973).

With the exception of the grade four school population, the mean scores on the WLQ of the TOWL for all other grade levels in the school were above the standardized mean score (x = 100). This may indicate that the standardized scoring norms are slightly inflated for the population. This phenomena was also noted by teachers in certain schools in the United States who felt that the test scores tended to over estimate students writing ability, (as reported by Carolyn Compton in her critique of the test see p. 79). The mean scores of the students in the study group were significantly lower on both the WLQ and subtests of the TOWL. In examining the differences for each subtest for the combined sample group it is interesting to note that the contrived subtests (ie. spelling, word useage and style) that test for mechanics appear to pose the most difficulty for the sample group while scores elicited from the spontaneous writing sample (i.e. Vocabulary and Thematic Maturity) are closer to the group means for each grade level. This was also found to be true in research conducted by Poplin et al when the TOWL was administered to children in grades three through eight when scores on the Vocabulary and Thematic Maturity tests "did not fall below one standard deviation from the norm" (p. 52). Spelling in particular represented the largest deficit ability of the sample population. It was suggested by Moran (1981) that "lowered spelling scores are characteristic of learning disabled students" and that "spelling performance may have some implications for screening" (p. 279). (see Table 1)

In examining the reading scores from the Gates MacGinitie Reading Tests (see Table 2) for the full and sample groups at each grade level, there are a variety of differences between the groups. Reading comprehension skill represented the largest deficit area for the sample students in grades 3, 5 and 6 while knowledge of vocabulary appeared to be more of a problem for the grade 4 and 7 sample students. The grade four students were actually not significantly below the grade levels of their peers in any of the reading areas measured on the Gates MacGinitie reading test.

On the Canadian Test of Basic Skills reading comprehension skills were the weakest reading scores for the sample group at all grade levels (see Table 3). This test was conducted eight months after the Gates MacGinitie reading test and consequently tested a higher level of comprehension ability. The grade four students however, again were only slightly behind the grade levels of the rest of the grade four students. It appears for the most part that students who were found to be weak writers also appear to be weaker readers in comparison to their peers. There appear to be children who are exceptions to this however, as indicated by the students in grade four. With the exception of the grade four students once again, all other students in the sample performed up to a grade level or more behind their peers in the mechanical aspects of language (i.e. spelling, capitalization, punctuation and useage).

The correlation coefficients comparing the Written Language

Quotient of the TOWL to grade scores from the Gates MacGinitie (see Table 4) indicate moderate to substantial correlations between reading and writing, as indicated by the higher correlations at grade six and seven. These correlations are higher than those reported by Wright and Reich (1972) who found a .46 correlation between composition scores on writing samples and subtest scores from the Gates-MacGinitie Reading Test drawn from 526 scores at the grade eight level. Their study may have produced a more accurate representation of this correlation due to the larger sample size.

The correlation coefficients relating the WLQ of the TOWL to reading and total language scores on the CTBS (see Table 5), again report moderate to substantial relationships between reading and writing, with the relationship apparently increasing with the higher grade levels. With the exception of the grade four coefficient however, the relationship between the Total Language Scores of the CTBS and the WLQ of the TOWL is even stronger than for those reported in reading. This would seem to indicate there are skills in written language that are not related to or dependent on reading skill. In a study conducted by Hogan and Mishler (1980), they too found a higher correlation between scores attained from a writing sample and a standardized language test than those measured between reading and writing scores. Their conclusions were that "the language test (in the Survey Battery) does relate more highly to free-writing performance than do objective tests in other curricular areas, thus, at least partially allaying the suspicion that we are dealing here with nothing more than a general verbal or overall educational development factor" (p. 226).

The correlation coefficient between teacher rankings of student achievement and the Written Language Quotient of the Test of Written Language (see Table 6) indicates a significant relationship between the two. This may suggest that there is reasonable validity to the TOWL or that teachers tend to measure written expression of students in much the same way overall as the TOWL. It is interesting to note that the correlation between the Thematic Maturity subtest of the TOWL and teacher rankings is much lower in comparison to the previous correlation. The Thematic Maturity subtest was chosen for comparison as it appears to be the one subtest that provides the most representative measurement of the student's skill in communicating meaning in writing regardless of mechanical errors. Based on these results it would appear that these teachers take a students mechanical abilities in writing into strong consideration when rating written language skills.

In examining the scores achieved by the study group in grades 3, 4 and 5 who were administered the TOLD-I (see Table 7) it was found that the mean scores for the group were below the standardized norms for all subtests and composite scores. With the exception of the Word Ordering subtest (which is thought to measure both listening and speaking skills) all other test scores were within one standard deviation from standardized test norms. The lower score on the Word Ordering subtest may be related to the generally lower scores reported on the Digit Span subtest of the WISC-R measuring short term auditory memory skills. The Word Ordering subtest also appears to call for short term auditory memory ability as it requires the student to reorder from three to seven words presented by the examiner into a meaningful sentence.

It does appear however, for the most part that these children with writing problems tended to have lower than average oral language skills as the standard deviations for this group indicate little variance in skill levels. There was one exception from this population. One child was found to have average to above average scores in all subtests and composite scores with a Spoken Language Quotient of 117.

The mean scores measured for the students in grades 6 and 7 who completed the Test of Adolescent Language also showed several scores that were below the standardized norms for the test (see Table 8). With the exception of four composite scores,all other subtest and composite means were still within one standard deviation from the standardized means. The composites that fall below one standard deviation were "Listening" - described as "the ability to understand the spoken language ie. the speech of other people" (Hammill et al, 1982 p. 12); "Reading" - comprehension of written material; "Written Language" - defined as "the ability to read and write" (Hammill et al, 1982, p. 12), and "Receptive Language", defined by the authors as "the ability to comprehend both written and spoken language". Those subtests and composites means that were closest to the standardized means were those related to the components measuring "speaking" skills or "the ability to express ones ideas vocally" (Hammill et al, 1982, p. 12).

While it appears that most of thes students were measured to have average intact speaking skills, they were found to have low average to below average skills in other language areas including reading, writing, listening and auditory comprehension skills. This again suggests that students with writing problems often have difficulties in other language areas that may be interfering with writing skill development.

In examining the relationship between the Written Language Quotients or the Test of Written Language and composite scores from the Test of Language Development - Intermediate (see Table 9) there were no significant correlations. This lack of relationship may simply be due to the lack of power in the small size of the population because the mean scores indicate that the group had generally below average scores, and the standard deviations indicate a rather restricted range of scores. It could also be hypothesized that the writing difficulties experienced by this group are less related to lower level language skills (oral language) than to those at higher levels e.g. reading or that this test instrument may not be sensitive to oral language difficulties that could affect written language skill development. It does suggest however, that oral and written language contain components that are unique and that do not necessarily directly affect each other.

The data measuring the relationship between the Written Language Quotient of the Test of Written Language and composite scores on the Test of Adolescent Language (see Table 10) reveals significant correlations (at the .01 level of significance between the writing scores (WLQ) and the Written Language and Receptive Language composites of the TOAL. The correlation with the Written Language Composite score indicates consistency in the weak writing skills of the study group and presents evidence supporting the validity of the TOWL. In a study correlating the test of Written Language with composites on the Test of Adolescent Language Hammill et al (1980) reported a .67 correlation with the Written Language Scale (from Hammill and Larsen 1978, p. 18) which is only slightly lower than the .73 correlation measured in this study. The Receptive Language Composite is developed from a combination of the two reading subtests and the two listening subtests of the TOAL. It is interesting to note that neither the Listening Composite nor the Reading Composite correlated with the Written

Language Quotient but as the combination of the two did, suggesting that factors that could affect written language skill may be subtle and very complex. There were also significant correlations (at the .05 level of significance) between the Written Language Quotient of the TOWL and the Adolescent Language Quotient, and the Reading, Spoken Language, Vocabulary and Grammar Composites of the TOAL. The correlation of the WLQ of the Test of Written Language with the Adolescent Language Quotient which is a composite of all scores on the TOAL again indicates that any number of a multitude of language factors can affect written language ability. This correlation (.70) is only slightly higher than the correlation of .67 reported by Hammill et al (1980) in their study examining the correlations between the written language quotient of the TOWL and variables of the TOAL. The relationship between reading, vocabulary and grammar to writing is supported by the moderate to high correlations found previously in measuring the relationship between the written language quotient of the TOWL and components measuring these three areas on the Gates MacGinitie Reading Test and the Canadian Test of Basic Skills.

The correlation between writing skill and the Spoken Language composite which is formed from the two listening and the two speaking subtests of the TOAL is more difficult to interpret as neither of these two components correlated highly with the WLQ on their own. In fact, the composite scores that correlated the least with the WLQ scores were those of the Speaking composite. The listening component score appears to be related to some extent as it also affected the significance of the Receptive Language Composite score (which was formed from Reading and Listening composites). Again the interpretation of these results must be regarded with caution due to the small size of the sample.

In examining the means of the study group from their scores on the Wechsler Intelligence Scale For Children - Revised (WISC-R) (see Table 11), it was found that all means for the Verbal, Performance and Full Scale Scores were within the average range and slightly above the standardized mean of 100. The scores ranged from 120 to 90 on the Full Scale, 120 to 84 on the Verbal Scale and 120 to 92 on the Performance Scale. All subtest means from the Performance Scale were slightly above the standardized mean of 10. The verbal subtests were somewhat more variable but all remained within a standard deviation of the standardized mean. Relative to the rest of the means the mean for the Information Subtest was the lowest. This subtest is thought to measure a childs knowledge of general information and long term memory ability, however, the mean score is not significantly discrepant from the other subtest means to draw any conclusions. Based on the results for the group it would appear that there are no common patterns of scores from the students profiles that can provide any insights into intellectual factors that may affect writing skills. Each child has a unique profile of intellectual strengths and weaknesses.

The data measuring the correlations between writing and Scale Scores on the WISC-R (see Table 12) would support the previous conclusion as there were no significant relationships indicated.

The correlation coefficient of .86 was found between the Schonell and TOWL spelling tests and is significant at the .001 level of significance. This measurement was conducted simply as another method to establish the validity of the Test of Written Language. The grade scores between the two tests were obviously, highly similar.

CHAPTER V

SUMMARY, LIMITATIONS, CONCLUSIONS AND IMPLICATIONS

This chapter contains a summary of the study, its limitations, conclusions and implications for educators, evaluators and remediators involved in the teaching and testing of written language.

A. Summary of the Study

Review of the Study

This study was conducted in order to gain some insights into the types of problems experienced by students at an elementary and junior high school level who are having difficulty with writing skill development. The relationshps of written language to reading and oral language was also investigated. The Test of Written Language Development by Hammill and Larsen (1978) was used for the measurement of written language ability, as it is the most recently published standardized writing test available and little research has been conducted in investigating its effectiveness. Tests used for examining the relationship of writing to reading and oral language were the "Gates MacGinitie Reading Tests", "The Canadian Test of Basic Skills", "The Test of Language Development" and "The Test of Adolescent Language".

Additionally, writing scores were compared to scores from the "Weschler Intelligence Scale for Children - Revised" in order to determine if students with writing problems have any common patterns of strengths and weaknesses on an intellectual profile.

Teachers of the students involved in the study were also asked to rank their students writing ability and these ranks were compared to the scores from the "Test of Written Language".

FINDINGS OF THE STUDY

In response to the research questions found at the end of Chapter two, it was found for the most part, that students experiencing writing problems were also weak readers in comparison to their peers. Correlations between the Written Language Quotient of the Test of Written Language and total reading scores on the Gates MacGinitie Reading Tests were significant ranging from .48 to .70. Correlations between the Written Lanugage Quotient of the TOWL and reading vocabulary and comprehension scores on the Canadian Test of Basic Skills were also found to be significant ranging from .46 to .73. Correlations between written language and total language skills measured on the Canadian Test of Basic Skills were even higher however, ranging from .59 to .77.

In examining the relationship between teacher rankings of students writing ability and the scores from the Test of Written Language ability it was found that there was a significant correlation between them. There was however, a higher correlation between teacher ratings and the overall Written Language Quotient which is formed from a combination of two subtests measuring abilities from a writing sample and three subtests measuring mechanincs as compared to a lower correlation between teacher rankings and the Thematic Maturity subtest which is thought to be more of a measure of the written expression of ideas.

Based on the results from the Test of Written Language, it was found that 12 percent of the total population of 242 students tested were measured to have writing skills of one standard deviation or greater below the standardized norms of the test. Of these students, approximately nine percent had Full Scale IQ scores of 90 or better based on the norms of the Wechsler Intelligence Scale for Children - Revised.

Generally, students with writing difficulties were found to have below average oral language and listening skills. Correlations however, between the Written Language Quotient of the "Test of Written Language" and the composite scores on the "Test of Language Development - Intermediate" for the study group in grades three, four and five were not significant. Significant correlations were found between the Written Language Quotient on the "Test of Written Language" and the

Written Language (.73), Receptive Lanugage (.73), Reading (.67) Vocabulary (.66) and Grammar (.67) composites of the "Test of Adolescent Language". Additionally there was a correlation of .70 between the Written Language Quotient of the TOWL and the Adolescent Language Quotient of the TOAL.

There were no significant relationships found between the Written Language Quotient of the "Test of Written Language" and scale scores of the Wechsler Intelligence Scale for Children - Revised (WISC-R).

In examining the subtest scores from the "Test of Written Language" it was found that students with writing problems experience the most difficulty with the mechanical aspects of writing. Spelling in particular, represented the greatest deficit area for the students. Conversely, the students scores from the actual writing sample on subtests measuring vocabulary choice and ideation skills were generally found to be within a standard deviation of the standardized mean scores.

In examining the usefulness of the "Test of Written Language" it was felt that the test could provide some general indications of a students strengths and weaknesses in writing but did not contain enough items to supply a specific diagnostic breakdown. It was also found that the criterion-related validity of the test was supported by the significant correlations between the Written Language Quotients of the TOWL and the total language scores on the "Canadian Test of Basic

Skills" and the Written Language composite of the"Test of Adolescent Lanugage". There was also a significant correlation of .86 found between the Schonell Spelling Test and the spelling subtest on the "Test of Written Language".

B. Limitations of the Study

In conducting research that examines written language skills, there are so many factors and variables that can affect writing that it is virutally impossible to account for them all.

A single standardized test was used for the measure of writing ability which limits the type of skills being measured and the type of writing sample produced by each student.

There were two different test instruments used for measuring the language skills of the study population due to the difficulty in finding a standardized test instrument that was suitable for the age range of the students.

The major limitation to this study was the fact that the accessible population in terms of continuity was from a single elementary-junior high school and the sample group drawn from the population was small.

Therefore, all generalizations should be regarded with these limitations in mind.

C. Conclusions

Based on the main findings of this study, with regard to the questions asked in the thesis and an awareness of its limitations the following conclusions are made:

There appears to be a strong relationship between written language, oral language and reading. The data seems to suggest however, that there are components that are unique only to writing and therefore reading or oral language scores may not be accurate predictors of writing ability (Backlund et al 1980).

Furthermore, the relationship between the various oral language components measured by the TOLD-I and TOAL and Writing skills was found to be both subtle and intricate. It is consequently difficult to determine any specific variables that may affect written language. The fact that the majority of children were found to have weaknesses in all aspects of language however, suggests that a "holistic" approach which incorporates talking, listening, reading and writing together in language arts programs may be the most beneficial to skill development in all language areas. Koeller (1982), Tiedt (1983).

It is to be noted however, that there were students who were found to have average or better grade scores in reading and average and in one instance above average scores in measured components of oral language.

These exceptions are important reminders that each childs strengths and weaknesses are unique and remedial programming should be geared to individual needs.

Based on test scores from the Test of Written Language, children with writing problems appear to be experiencing the most difficulty with the mechanical aspects of writing. Spelling was found to be a particularly common problem within the group. This supports the research and adds evidence to the implication that educators should be alerted by spelling problems as early indicators of potential difficulties in writing, Moran (1981).. Relative to their mechanical skills on the TOWL the study groups scores were closer to the norm on subtests measuring actual written expression of ideas. This supports previous research and suggests that remedial approaches to writing should begin with ideation followed later by attention to mechanical errors. These findings should be taken into consideration by both regular teachers who in this study, appeared to place more emphasis on mechanics over the written communication of thoughts in their ratings of student writing ability.

The Wechsler Intelligence Scale for Children-Revised was not found to be useful, with the sample studied, as an instrument for predicting potential problems or intellectual patterns common to children with writing difficulties.

The criterion-related validity of the Test of Written Language was established in this study by the significant correlations found between the written language quotient of the TOWL and the Total Language Score of the CTBS and the Written Language Composite score on the TOAL.

There was also a significant correlation between the spelling subtest on the TOWL and the Schonell Spelling Test. In examining the usefulness of the TOWL, it like most standardized tests has its limitations. Clinicians and educators can gain general information regarding a child's strengths and weaknesses in writing from the TOWL but there are not enough items in each subtest to develop a detailed analysis of deficits. Additionally, students are required to provide only a single sample of writing which does not account for the variety of writing modes that could pose particular problems for certain children. To be fair to the authors of the Test of Written Language, they too discuss the limitations of this test instrument and caution evaluators not to make any hasty generalizations or programming decisions from scores gained from the test.

The TOWL may however, be useful as an initial screening device or in conjunction with criterion related on other direct assessment methods in developing a comprehensive battery of writing tests. Evaluators should also be aware that the TOWL was found in this research and in previous discussions to possibly over-estimate students writing skills.

The incidence of writing difficulties found in the population studied suggests that there should be more attention focused on writing skill development and more time provided for students to practice their skills in both regular and special education.

Written language is a difficult, challenging and sometimes perplexing area in which to conduct research. It is such an intricate and multifaceted process that it is virtually impossible to account for idiosyncrasies among students or control for the almost infinite number of variables that can influence writing ability. Research pertaining to written language problems and disabilities is further complicated by an even more limited knowledge base about factors that can interfere with normal written language acquisition and the great diversity of abilities among the learning disabled population. Poplin (1984) suggests that "actually more variation has been found within the category of learning disabilities than outside this population" (p. 131). It is hoped however, that despite these obstacles, research will increase in what has been described as "the highest achievement in language for all modern cultures" Barenbaum (1983). A great deal more information has to be accumulated if our goal as educators and diagnosticians is to improve and design effective writing programs for students placed in our care.

This study was conducted in an attempt to contribute to the knowledge about writing and difficulties experienced by students at the elementary and junior high level. Although in retrospect a larger initial sample might have ameliorated or clarified some of the problems it must be noted however, that due to the many inconsistencies in written language a large sample size may not have alieviated some of the inherent difficulties involved in writing research.

In spite of the complexity of written language it was suggested from this study and studies discussed in the literature review (eg. Wright and Reich (1972); Applebee (1977); Baden (1981); Stotsky (1983)) that ability in writing is closely related to reading and oral language skill, although certain factors seem to indicate that it is a unique it is a unique process. Students with writing problems seem to have particular difficulties with the mechanics in writing, and spelling appears to be an indicator for potential problems in writing. There were exceptions and inconsistencies in skill development in the language areas across students and once again this thesis supports the need for individualized programming. Further implications follow.

D. Implications

IMPLICATIONS FOR EDUCATORS

A review of the literature suggests that more time should be devoted to the development of writing skills in classroom language arts programs. This time should focus on the actual expression of ideas rather than on the mechanical aspects of writing. It must be emphasized however, that more time is not the sole answer to an effective writing program. For example, in a study conducted by Lernhardt, Zigmond and Cooley (1980), (as reviewed by Silverman et al 1981), in which they observed students working in time designated for "writing" they found that seventy five percent of this time was actually spent on activities that simply involved "copying" rather than expressive writing. This type of activity is not conductive to the promotion of written language skills. Time spent in a quality writing program should be focussed on the actual expression of ideas rather than on the mechanical aspects of writing or copying exercises. Results from this study suggested that teachers tend to judge writing ability based heavily on the mechanics involved in writing rather than placing an emphasis on the communication of meaning in written language.

Based on this study and a review of the literature, it is the author's opinion, that oral language, reading and writing are closely related but unique language skills. The writer suggests that students may enjoy more success and more balanced skill development in language arts through the use of an integrated language arts approach. Written expression can become an integral part of a Language Arts program even in the earliest grades. In fact, early experiences stressing writing as an enjoyable communication method may prevent writing from becoming a chore in later grades and may indeed in the future, lessen the number of children experiencing difficulty and frustration with written language.

IMPLICATIONS FOR EVALUATORS

As a clinician, probably one of the most useful insights gained from this study for the writer is that standardized test instruments in written language cannot provide a comprehensive assessment of skill levels, and a students specific strengths and weaknesses in writing. All too often, we as clinicians tend to rely on standardized tests in making a diagnosis and send a student on for help without a thorough investigation into the types of difficulties he or she is experiencing. Although assessment of written expression continues to be a complex and rather perplexing area, a review of the literature reveals that there are many testing devices outside of objective tests that can be helpful if one has a clear idea about the purpose for the assessment and the uses and limitations of the various test instruments. It is important for evaluators responsible for assessing writing skills to have a more thorough knowledge of the variety of assessment methods that are available and a clearer understanding of the multitude of factors that can affect a students writing ability if we are to develop more comprehensive methods for evaluating and remediating writing skills.

IMPLICATIONS FOR REMEDIAL EDUCATORS

Resource room teachers and other teachers involved in special education should ensure that writing is incorporated as a major part of language arts remedial programs. All too often the sole focus is on remedial reading and writing is virtually ignored. Children with learning problems often have difficulty re-integrating academically with their peers even when reading skills have improved, due to difficulties in coping with the written language demands in the regular classroom, such as note taking, essay writing and completion of exams requiring written answers.

It is also important to develop individualized remedial programs that are based on a specific breakdown of a students strengths as well as his or her weaknesses in writing. Results from this research and a review of the literature suggests that many students experiencing difficulty with writing can actually express ideas reasonably well if teachers can overlook the mechanical errors contained in the compositions. The literature suggests that remedial programs should focus first on encouraging the flow of thoughts and communication in writing and then on the specific mechanical problems experienced by each student.

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